DOCUMENTATION FOR THE 1996 BASE YEAR NATIONAL TOXICS INVENTORY FOR POINT SOURCES

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1.0 INTRODUCTION

1.1 What is the National Toxics Inventory?

The National Toxics Inventory (NTI) is a national repository of inventory data and estimated emissions for hazardous air pollutants (HAPs) and their sources. It was created by the Emission Factor and Inventory Group (EFIG) in Research Triangle Park, North Carolina, of the U.S. Environmental Protection Agency (EPA). The original version of the NTI has a 1993 base year, and it will be used as the baseline to track future changes in HAP emissions nationwide.

This report presents an overview of how the major, or point, source component of the 1996 NTI was compiled. The 1996 base year NTI used to support air quality modeling and other activities. To this end, the EPA established a goal to compile comprehensive, facility-specific data in its 1996 base year NTI for point sources, in addition to preparing area and mobile source 1996 base year inventories.

1.2 Why Did the EPA Create the NTI?

The Clean Air Act (CAA), as amended in 1990, includes many mandates for the EPA related to HAPs. The CAA presents a list of 188 HAPs (see *http://www.epa.gov/ttn/uatw/188polls.txt* for a list of pollutants and their chemical abstract service [CAS] numbers), for which EPA is to identify their sources, quantify their emissions by source category, develop regulations for each source category, and assess public health and environmental impacts after the regulations are put into effect. The NTI is a tool that EPA can use to meet the CAA mandates.

1.3 How is the EPA Going To Use This Version of the NTI?

It is anticipated that the 1996 point source inventory developed from this effort will have multiple end uses. The initial objective is to make the data available to EPA modelers for use in

the National Air Toxics Assessment. The data have been formatted according to protocols established for the EPA's National Emissions Trends (NET) submittals. The common data structure on which the NET platform is based will allow the NTI point source data to be transferred to multiple end-users for a variety of purposes.

In addition, the emissions data compiled as part of this inventory effort will be used to prepare the air toxics portion of the annual EPA publication entitled *National Emissions Trends Report*, which is referred to as the EPA Trends report.

1.4 Report Organization

Following this introduction, Section 2.0 provides information on how the 1996 NTI point source HAP emission estimates were derived from state and local inventories, from data provided by the EPA's Emission Standards Division (ESD), and from the Toxic Release Inventory (TRI).

Section 3.0 discusses the steps that were taken to evaluate the completeness of the NTI. Section 4.0 provides information on how the HAP inventory data were compiled into a common data structure.

Appendices A through E provide details on how the state and local agency HAP inventory data were identified, retrieved, and formatted into a common data structure for the draft NTI. Appendix F presents the data request forms populated by ESD.

2.0 DEVELOPMENT OF THE NATIONAL TOXICS INVENTORY FOR POINT SOURCES

The scope of the inventory effort was to compile 1996 base year HAP emissions data for point source facilities in the United States. Most of the point source emissions in the NTI are emitted from facilities that EPA defines as major sources. Major sources are defined in the CAA as stationary sources that:

- Emit 10 tons per year (tpy) or more of one HAP; or
- Emit 25 tpy or more of any combination of HAPs.

The goal in developing the point source NTI was to obtain facility-specific data such as facility name, location, stack information, emissions, and process descriptions. It was hoped that the data would be sufficient to support exposure modeling and risk assessment needs. The starting point for obtaining this facility-specific data was, therefore, state and local air pollution control agencies, who are most likely to have this type of detailed HAP inventory data.

2.1 EFIG Requested State and Local Inventory Data

The results of a State and Territorial Air Pollution Program Administrator and Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) survey formed the starting point for requesting air toxics inventory data from each of the states. The STAPPA/ALAPCO survey was conducted in May 1997, and was sent to all state and local air agencies in the United States. A copy of the survey is provided in Appendix A of this report. The STAPPA/ALAPCO survey requested information regarding whether or not air toxics emissions data are collected by a state or local agency, what type of data are collected, whether any risk assessments have been performed, and to what extent the data are accessible to other users. Each survey asked for a primary contact person for obtaining more information about the state or local agency's air toxics program. This person served as the initial point of contact to

follow up on the STAPPA/ALAPCO survey responses and request the transfer of inventory data for this project.

EFIG developed a series of questions and a list of desired data elements before contacting the state and local agencies to determine the type of data they could provide. Appendix B of this report contains the series of follow-up questions that were used to clarify and request information from the state and local agencies.

The target inventory area included every state in the United States and every county within a state. There were no boundary limitations pertaining to traditional criteria pollutant nonattainment areas or to designated urban areas. If a facility was included in a state or local database, it was to be included in the NTI regardless of where in the state it was located.

The pollutants inventoried included all 188 HAPs identified in Section 112(b) of the CAA. It was anticipated that some state or local agencies may collect information on more than these 188 HAPs, and some may collect information on a smaller subset of HAPs.

Table 2-1 lists the data elements that were targeted for the inventory request and that are needed by modelers for exposure assessments. In many cases, this list was provided directly to the state or local air toxics coordinator to determine to what extent their programs collected these data. If a state indicated that they had pertinent information beyond what appeared on the data elements list, EFIG requested that this information be transferred as well.

In all cases, EFIG requested 1996 facility-specific emissions data. If area and mobile source data were available, these were also requested to be included in the data transfer. No limits were set on the type of source categories for which data would be collected. No particular cut-off level of emissions was used. It was expected that each state would have different designations for the sources for which they collect emissions data

Table 2-1

Data Elements Requested from State and Local Agencies

Emission Level	Data Elements
Facility	Name
	Identification codes (local, state, or federal)
	Standard Industrial Classification (SIC) codes
	Location (latitude/longitude or Universal Transverse Mercator [UTM] coordinates; county name and/or county Federal Information Procedures System [FIPS] code)
Emission Point	Process description and identification code (e.g., the source classification code [SCC] for the process)
	Release type identifier (e.g., a code that identifies a stack or fugitive emission)
	Stack height
	Stack diameter
	Stack exit velocity
	Stack temperature
	Horizontal and vertical dimensions (if non-stack emission point)
	Distance from stack to nearest point on fence line
	Control device description
Pollutant	Chemical Abstract Service (CAS) # and name
	Annual emissions estimate (e.g., actual emissions in tons per year; also allowable emission levels if available)
	Pollutant maximum hourly emission rate (peak release) from emission point

at the point level (as opposed to treating them as area sources); no effort was made to strictly define what would be considered a “major source” in the data collection effort.

The goal of the data collection effort was to facilitate the transfer of as much data as possible from the state to EFIG, and not put a burden on the state or local agencies to filter and sort the data to meet the project needs. This required that either a detailed file description accompany each submittal, or that the point of contact at each state provide EFIG with enough information to process the database to meet the project needs. In all cases where air toxics data were available from a state, it was requested that the data be transferred in an electronic format, preferably in a spreadsheet or database format, so that the information could be processed.

The data request portion of this task started in November 1997 and was essentially completed by May 1998. Two state databases were received and incorporated in 1999, West Virginia and Nebraska. While some states indicated they were in the process of compiling an air toxics inventory, EFIG needed to establish a cut-off point for the receipt of data in order to complete the remaining tasks on the project. These tasks included processing the data for upload to the NET Oracle® format, requesting and processing data from ESD, identifying duplicate facilities between these two data sources, supplementing with Toxics Release Inventory (TRI) data if gaps remained, soliciting review by state and local agencies and EPA, and addressing review comments in this final inventory.

2.2 Data Received from State and Local Agencies

A total of 60 state and local agencies were contacted (some local air agencies have jurisdiction for inventory development rather than the state). Table 2-2 lists the 40 states for which air toxics inventory data were obtained. Air toxics inventory data that were suitable for use in the 1996 NTI major source database were obtained for 36 states. The footnotes to Table 2-2 provide information on why data from Hawaii, Michigan, Minnesota, and Ohio were

Table 2-2

States for Which Air Toxics Inventory Data Were Obtained

State	State or Local Agency Contact
Arizona[a]	Frank Keene
Arkansas[b]	Mike Porta/Evelyn Withers
California	Chris Nguyen
Colorado[b]	Jean Terry
Delaware	Jack Sipple
Florida	Yi Zhu
Hawaii[c]	Nolan Hirai
Idaho	Tim Teater
Illinois[d]	Hank Naour
Indiana[d]	John Bates
Kansas	Dana Morris
Kentucky	Donna Moore/Ken Irwin
Louisiana	Jim Oregon
Maine	Ellen Doering
Maryland	Michael Pokorny
Michigan[e]	Gary Baker
Minnesota[e]	Chunyi Wu
Mississippi[b]	Danny Jackson/Elliott Bickerstaff
Missouri	Carrie Schulte
Nebraska[b]	Sue Bowring
New Hampshire[b]	Tom Niejadlik/Sonny Strickland
New Mexico	Jim Nellessen
New York	Tom Gentile/Eric Wade
North Carolina	Carol Walker
North Dakota	Craig Thorstenson
Ohio[f]	Paul Koval
Oregon	Gregg Lande/Gerry Ebersole
Pennsylvania[b]	Tom Weir
Rhode Island	Barbara Morin
South Carolina	Bob Betterton
South Dakota[b]	Jackie Flowers

Table 2-2

States for Which Air Toxics Inventory Data Were Obtained (Continued)

State	State or Local Agency Contact
Tennessee[b]	Eric Hutton
Texas	Kyle Tollefson
Utah	Carol Nielson
Vermont	Dan Riley
Virginia[b]	Gordon Kirby
Washington[g]	Sally Otterson
West Virginia[b]	David Porter
Wisconsin	Grant Hetherington
Wyoming[b]	Mark Arn

[a] Includes only four counties in the Phoenix urban area.
[b] Data retrieved from the Aerometric Information Retrieval System (AIRS).
[c] Received only hard copy--data not processed for this project.
[d] Data compiled from combination of Great Lakes Commission (GLC) inventory data and state-provided databases.
[e] Received data for this state as part of GLC inventory; however, emissions data were only available at the county level and therefore were not used for this inventory which required facility-level data at a minimum.
[f] Ohio inventory data were received as part of the GLC inventory, but were 1993 TRI data; for another task on this project, 1996 TRI inventory data will be obtained and used in lieu of the 1993 TRI inventory for Ohio.
[g] Includes only areas in the N.W. Air Pollution Authority, Olympic Air Pollution Control Authority, the Spokane County Air Pollution Control Authority, and the Puget Sound Air Pollution Control Agency area. Data retrieved from AIRS and from state-provided database.

not used in the NTI. The footnotes to Table 2-2 also indicate that not all of the inventories have complete geographic coverage.

In addition to inventory data received directly from the state or local agencies, 1993 baseline inventory data were also obtained from the Great Lakes Commission (GLC). The GLC inventory covers seven states: Illinois, Indiana, Michigan, Minnesota, Ohio, Pennsylvania, and Wisconsin. For three of these states (Illinois, Indiana, and Wisconsin), inventory data were also received directly from the state contacts. For the final processing steps, a combination of GLC and state-submitted inventory data were used for Illinois and Indiana; for Wisconsin it was determined that the state-submitted database was better for this project due to its 1996 base year and greater number of records.

AIRS was used as a source of facility-specific data when the state or local air pollution control agency contact indicated that this would be the most desirable method to obtain an electronic copy of their emissions data. Data were downloaded from AIRS for 11 states and one air pollution control authority (Puget Sound, WA).

Two data filtering steps were required to obtain HAP emissions through AIRS. The first step was to download all emissions data excluding criteria pollutants. The second step was to select HAPs from these emissions data using the Chemical Abstracts Service (CAS) number or AIRS pollutant code for the 188 HAPS listed in the CAA. HAPS were identified with the same list of CAS numbers that was used to filter data received from the states.

For the data reported through AIRS, the majority of desired data fields were available. A list of the data fields retrieved from AIRS is provided in Appendix C. The emissions data for each facility are given for the most current year reported in AIRS. The majority of facilities have emissions reported for the years 1995 through 1997. Segment, or source classification code (SCC) level, data were retrieved for all facilities that contained this level of data in AIRS. If a pollutant was only reported at the facility level, then facility-level emissions were included in the

1996 facility-specific database. In some cases, the AIRS retrieval for a particular state consisted of a combination of facility-level and segment-level data.

Various emission types may be reported to AIRS. Emission types were prioritized for retrieval from AIRS based on their availability and how well the emission type met the objectives for the 1996 facility-specific inventory.

Following is the order of priority for each of the emission types used for the AIRS retrievals on this project:

1. Estimated emissions without any rule effectiveness adjustments;
2. Actual uncontrolled annual emissions;
3. Estimated emissions with rule effectiveness adjustments;
4. Potential controlled emissions; and lastly,
5. Potential uncontrolled emissions.

The majority of states reported estimated emissions without adjusting for rule effectiveness. When this emission type was not available, actual uncontrolled annual emissions or estimated emissions with rule effectiveness were used.

In all cases, regardless of whether the data came from the state directly, were obtained from AIRS by EFIG, or obtained from the GLC database, the inventory data were either originally prepared by the state or local agency, or reported by the agency (which assumes that the agency has reviewed and/or approved the inventory). There were no efforts by EFIG to review the inventory estimates for their accuracy or calculate new emission estimates. The goal at this point was to compile whatever facility-specific state and local data were available. Filling data gaps and evaluating the quality of the data will be addressed later in this project.

One of the most obvious inconsistencies between the data received and the objectives of this task is that not all the inventory data represent 1996 information. Every effort was made to obtain 1996 inventory data; however, data from 1996 were not always available. This was not unexpected, however, since there is no federal mandate for states to collect HAP inventory data. Many states have no formal requirement for facilities to inventory their air toxics emissions at all, much less on an annual basis.

In the absence of 1996 base year data, EFIG requested inventory data for the year closest to 1996. In some cases, this turned out to be data for 1994, 1995, or even 1997. Some states, like California, have a rolling base year; this means the emissions data for any given facility are updated only when there are significant modifications or changes to a facility. Under this format, the base year for their inventory can vary from plant to plant, and also extend back five or more years depending on when the last significant change occurred at a facility. This scenario will still present data representative of 1996 as long as the facility was still operating under similar conditions in 1996 as compared to the base year for which their data are reported. No effort was made to verify this for individual facilities however.

Table 2-3 presents a summary of the information provided by each state.

2.3 EFIG Requested ESD Maximum Achievable Control Technology Inventory Data

State-provided databases represent the core of the point source inventory. Inventory data were also requested from the EPA's ESD for Maximum Achievable Control Technology (MACT) source categories. The information requested from ESD was identical to the information requested from state and local agencies. The data elements requested are listed in Table 2-1. To facilitate the incorporation of ESD MACT data, EFIG created an electronic template for ESD to populate with their HAP emissions data. The format of the template was directly compatible with EPA's Oracle®-based NET program.

Table 2-3

Summary of Information Provided by State

State/Locality	Level of Detail: Emissions[a]		Level of Detail: Location		SIC Code Reported	SCC Reported	Stack Elements	Type of Emissions				Control Device Info
	Emission Unit Level	Process or SCC Level	Facility Lat/Long or UTM	Stack Lat/Long or UTM			Height, Diameter, Exit Velocity, and Exit Gas Temperature	Actual Annual	Allowable Annual	Maximum Hourly	Potential Annual	
Arizona[b]	✓	✓	✓	✓	✓	✓	✓	✓				
Arkansas	✓	✓	✓	✓	✓	✓	✓	✓				✓
California	✓	✓	✓	✓	✓	✓	✓	✓				✓
Colorado	✓	✓	✓	✓	✓	✓	✓	✓				✓
Delaware[c]	✓	✓	✓		✓	✓	✓	✓				✓
Florida	✓	✓	✓			✓	✓	✓				
Idaho		✓	✓		✓		✓		✓			
Illinois	✓	✓	✓		✓	✓	✓	✓	✓	✓		
Indiana		✓	✓		✓	✓		✓			✓	
Kansas	✓	✓	✓		✓	✓	✓	✓				
Kentucky (Jefferson County)	✓	✓	✓		✓		✓	✓				
Louisiana	✓	✓	✓		✓	✓		✓				
Maine			✓		✓			✓				✓
Maryland	✓		✓		✓		✓		✓	✓	✓	✓
Mississippi		✓	✓	✓	✓	✓	✓	✓				
Missouri	✓	✓	✓		✓	✓	✓	✓				✓
New Hampshire		✓	✓	✓	✓	✓	✓	✓				✓
New Mexico[c]	✓	✓	✓	✓	✓		✓	✓			✓	✓
Nebraska	✓	✓	✓	✓	✓	✓	✓	✓				✓
New York	✓				✓		✓	✓				✓
North Carolina			✓		✓			✓			✓	
North Dakota	✓		✓		✓		✓	✓				
Oregon					✓						✓	
Pennsylvania		✓	✓	✓	✓	✓	✓	✓				✓

Table 2-3

Summary of Information Provided by State (Continued)

State/Locality	Level of Detail: Emissions[a]		Level of Detail: Location		SIC Code Reported	SCC Reported	Stack Elements	Type of Emissions				Control Device Info
	Emission Unit Level	Process or SCC Level	Facility Lat/Long or UTM	Stack Lat/Long or UTM			Height, Diameter, Exit Velocity, and Exit Gas Temperature	Actual Annual	Allowable Annual	Maximum Hourly	Potential Annual	
Rhode Island		✓	✓		✓		✓	✓				
South Carolina		✓	✓			✓		✓				✓
South Dakota		✓	✓	✓	✓	✓	✓	✓				
Tennessee		✓	✓	✓	✓	✓	✓	✓				✓
Texas[c]	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓
Utah		✓	✓			✓		✓				
Vermont			✓		✓			✓				
Virginia	✓	✓	✓	✓	✓	✓	✓	✓				✓
Washington (Puget Sound Air District)	✓	✓	✓	✓	✓	✓	✓	✓				
Washington (N.W. District, Spokane Cty, and Olympic Air District)	✓	✓	✓				✓	✓				
West Virgina	✓	✓	✓	✓	✓	✓	✓	✓				✓
Wisconsin	✓	✓	✓		✓	✓	✓	✓				✓
Wyoming	✓	✓	✓	✓	✓	✓	✓	✓				✓

[a] At the minimum, every state database contains facility-level emissions.

[b] Arizona data also contains average daily emissions.

[c] Horizontal and vertical dimensions have been provided for nonstack sources in these states.

Appendix F-1 presents a copy of a blank ESD data request template, and the instructions EFIG provided with the templates. Four templates were provided for ESD to populate, depending on how ESD could report their HAP emissions estimates. A national template was available if emissions and emissions-related data were only available at the national level for an entire MACT source category or for individual processes in a MACT source category. If facility-level data were available, a facility template was provided for general facility information such as name, ID, and location. Stack data were to be provided in the stack parameters template. And lastly, the emissions template was provided for emissions and emissions-related data at the facility, unit, or process level.

2.4 Data Received from ESD

Data were provided for 95 MACT source categories with varying levels of detail. Table 2-4 presents the list of 58 MACT categories for which ESD provided facility-level HAP emissions data for formatting and potential incorporation in the point source NTI. For these source categories, the electronic templates populated by ESD were formatted and compared to the facilities in the state databases to identify duplicate facilities. Facility lists were provided for an additional nine MACT categories. These lists were used to identify facilities in the state and local databases and TRI database that are subject to MACT.

The process used to format the facility-level emissions data provided by ESD is summarized in Appendix F-2. After the data were formatted, duplicate, non-HAP, and incomplete records were removed. Records with blank/zero emissions were also removed. A screening step was then conducted to determine if there were duplicate facilities with the state and local agency inventories. The following steps were used to identify duplicate facilities:

- **Step 1** Run a query on the state and local inventories on the facility name;

Table 2-4

MACT Source Categories With Facility-level Emissions Data

MACT SOURCE CATEGORY
ACETAL RESINS PRODUCTION
ACRYLIC FIBERS/MODACRYLIC FIBERS PRODUCTION
ACRYLONITRILE-BUTADIENE-STYRENE PRODUCTION
AMINO/PHENOLIC RESINS PRODUCTION
BOAT MANUFACTURING
BUTYL RUBBER PRODUCTION
CARBON BLACK PRODUCTION
CELLOPHANE PRODUCTION
CELLULOSE ETHERS PRODUCTION
CELLULOSE FOOD CASING MANUFACTURE
CELLULOSIC SPONGE MANUFACTURE
CHLORINE PRODUCTION*
CLAY PRODUCTS MANUFACTURING
COKE BY-PRODUCT PLANTS
COKE OVENS: PUSHING, QUENCHING, AND BATTERY STACKS
COKE OVENS: CHARGING, TOP SIDE, AND DOOR LEAKS
CYANIDE CHEMICALS MANUFACTURING
EPICHLOROHYDRIN ELASTOMERS PRODUCTION
ETHYLENE PROPYLENE RUBBER PRODUCTION
FLEXIBLE POLYURETHTANE FOAM PRODUCTION
FRICTION PRODUCTS MANUFACTURING
FUMED SILICA PRODUCTION
HAZARDOUS WASTE INCINERATION
HYDROGEN FLUORIDE PRODUCTION
HYPALON (TM) PRODUCTION
INDUSTRIAL BOILERS
INTEGRATED IRON AND STEEL MANUFACTURING*
IRON FOUNDRIES*
LEATHER TANNING AND FINISHING OPERATIONS
METAL CAN (SURFACE COATING)
METAL COIL (SURFACE COATING)*
METAL FURNITURE (SURFACE COATING)
METHYL METHACRYLATE-ACRYLONITRILE-BUTADIENE-STYRENE PRODUCTION
METHYL METHACRYLATE-BUTADIENE-STYRENE TERPOLYMERS PRODUCTION
MINERAL WOOL PRODUCTION

Table 2-4

MACT Source Categories With Facility-level Emissions Data (Continued)

MACT SOURCE CATEGORY
MISCELLANEOUS METAL PARTS AND PRODUCTS (SURFACE COATING)*
MUNICIPAL WASTE COMBUSTORS
NEOPRENE PRODUCTION
NITRILE BUTADIENE RUBBER PRODUCTION
NITRILE RESINS PRODUCTION
PETROLEUM REFINERIES: CATALYTIC CRACKING UNITS, CATALYTIC REFORMING UNITS, AND SULFUR PLANT UNITS
PETROLEUM REFINERIES: OTHER SOURCES NOT DISTINCTLY LISTED
PHARMACEUTICALS PRODUCTION
PLYWOOD AND COMPOSITE WOOD PRODUCTS*
POLYBUTADIENE RUBBER PRODUCTION
POLYCARBONATES PRODUCTION
POLYETHYLENE TEREPHTHALATE PRODUCTION
POLYSTYRENE PRODUCTION
PORTLAND CEMENT MANUFACTURING
PRIMARY COPPER SMELTING
PRIMARY MAGNESIUM REFINING
PULP AND PAPER PRODUCTION
RAYON PRODUCTION
REFRACTORIES MANUFACTURING*
SECONDARY LEAD SMELTING
SEWAGE SLUDGE INCINERATORS
SPANDEX PRODUCTION
STATIONARY INTERNAL COMBUSTION ENGINES
STATIONARY TURBINES
STEEL FOUNDRIES*
STYRENE ACRYLONITRILE PRODUCTION
STYRENE-BUTADIENE RUBBER AND LATEX PRODUCTION
TIRE PRODUCTION
URANIUM HEXAFLUORIDE PRODUCTION*
UTILITY BOILERS
VEGETABLE OIL PRODUCTION
WET-FORMED FIBERGLASS MAT PRODUCTION

*A facility list was provided.

- **Step 2** If there was a match, verify that other information such as state, county, zip code, TRI ID (or other type of ID), and latitude/longitude coordinates are identical;

- **Step 3** If there is a match on any of these parameters, it is assumed to be a duplicate and the ESD and state or local records for each facility are compared more closely; and

- **Step 4** Steps 2 and 3 listed above are also run beginning with TRI or AIRS ID, latitude/longitude, zip code, and county where there were no direct matches on facility name.

If no duplicates were identified in these steps, it was assumed that the ESD facility could be added to the NTI.

If there was a match on any of these combined queries, the facility records were compared more closely. If it was determined that a facility was included in the ESD data set as well as the state or local data set, the following series of pass-fail questions were applied to both data sets.

1. **Are the emissions "actual" emissions?**---That is, do the emissions represent actual releases to the atmosphere, where the effect of controls are taken into account? Actual emissions are preferred over "potential", "permitted", "maximum", or "uncontrolled" emissions where there are known controls in place. The goal is to use actual emissions where available for the 1996 inventory.

2. **Are the emissions non-TRI based?**---Determine the source of the two data sets. If either one of the two is based on TRI, the TRI-based set is dropped from consideration.

3. **Are the emissions at the SCC or process level?**---Determine the level at which the emissions are being reported for each data set. It is preferable to use the SCC/process-level emissions data if available. For example, if the ESD data set only reports the facility level, but the state or local data set for that facility contains SCC or process level emission records, the existing state or local records for that facility would be used rather than the ESD emissions data for that facility.

2.5 How Did EPA Identify and Fill Gaps in the State- and ESD-Combined Database?

As discussed above, HAP inventory databases suitable for incorporation into the NTI were provided by 36 states, but with varying degrees of completeness. Facility-level emissions data were provided for 58 MACT source categories. After the state-provided and ESD data were incorporated in the 1996 major source NTI, it was then evaluated to identify gaps and determine how the gaps could be filled.

2.5.1 When Specific Emission Sources Were Not Included in a State Database

To assess the completeness of the NTI for source category and facility coverage, TRI data were used. The purpose of this TRI search was to determine if the state- and ESD-combined databases (referred to hereafter as the NTI) needed to be supplemented with data for facilities that reported to TRI, but were not included in the NTI for some reason. For facilities included in both the NTI and TRI, it was assumed that the NTI data were more accurate and, thus, no revisions were made for those facilities.

The TRI facilities missing from the NTI were identified through a process of elimination. Facilities included in the NTI were matched against TRI-listed facilities using one or more of the following parameters:

- County;
- Facility name;
- Facility SIC code;
- Facility address;
- Parent company name; and
- Latitude and longitude coordinates.

Figure 2-1 illustrates the process for determining whether a TRI facility needed to be added to the NTI.

2.5.2 How Did EFIG Add Stack Parameters If They Were Missing?

The goal of this project was to create a major source inventory that includes facility-specific data such as facility location, stack information, emissions, and process descriptions. The stack information needed includes stack diameter and height, gas temperature, velocity, and flow rate.

To this end, information was needed to supplement the NTI (including the TRI additions made by EFIG), with stack parameters needed for exposure modeling. Default stack parameters were obtained from EPA's Office of Policy, Planning and Evaluation (OPPE) for a total of 372 Standard Industrial Classification (SIC) codes. These defaults were used for emissions data that were reported at the SIC code level. In addition to some state and local agency and ESD databases, TRI-reported emissions are reported at the SIC code level. Default stack parameters were also obtained from EPA's National Exposure Research Laboratory (NERL) for a total of 3,538 SCCs. These data were added to state and ESD databases that reported emissions at the SCC level, but did not include the necessary stack parameters. Discussed below are the assumptions that were made in populating the NTI with default stack parameters:

- For sources with missing stack parameters, SCC default stack parameters, when available, took priority over SIC code default stack parameters;
- For facilities where no information was available on the type of emission release (i.e., stack vs. fugitive), it was assumed that the emission release point is a stack, and, where available, default stack parameters where added;
- For a given facility, if only some of the necessary stack parameters were included in the NTI, the stack parameter fields were reevaluated and sometimes populated with default parameters according to one of the eight scenarios provided in

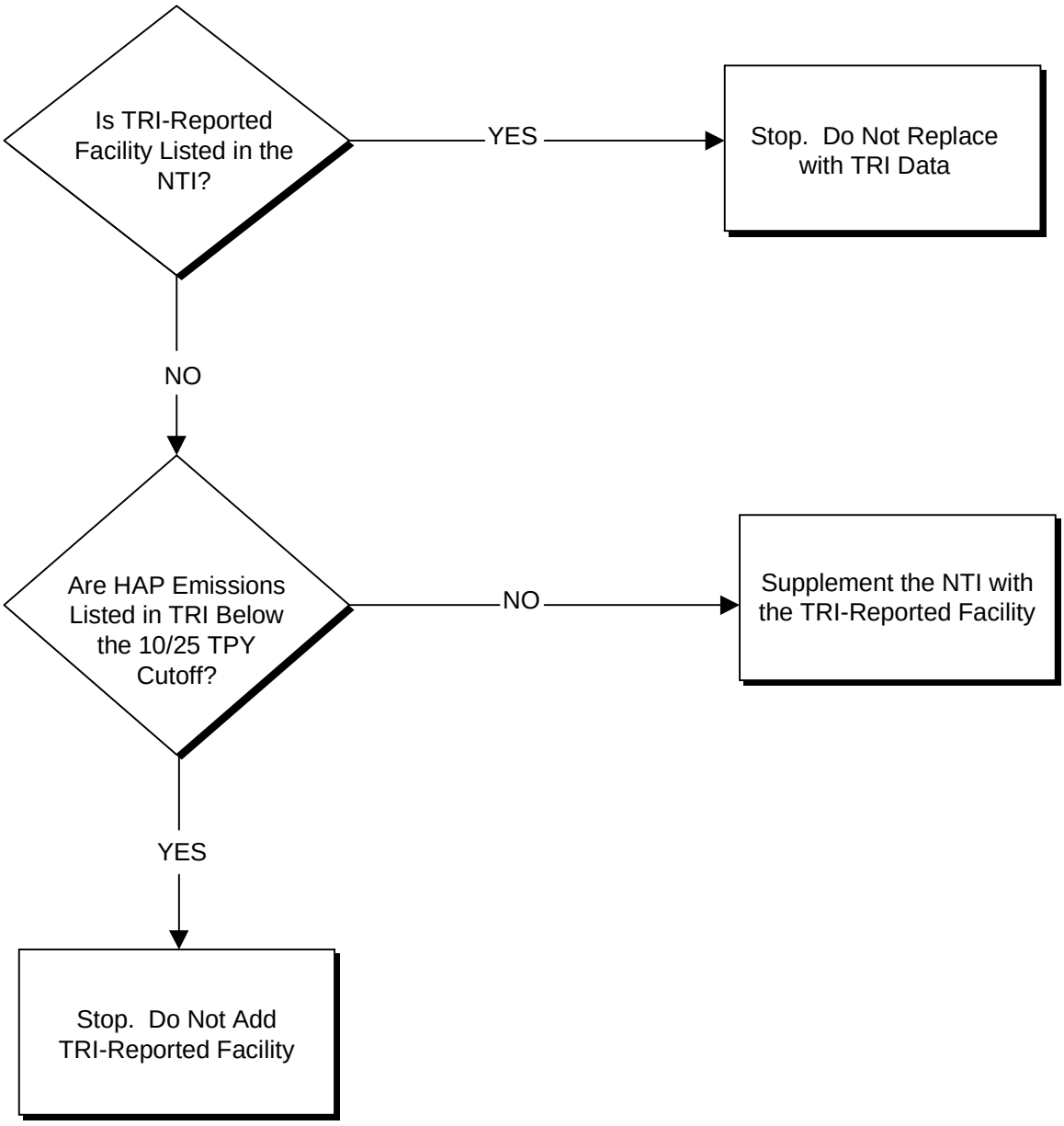

FIGURE 2-1. ALGORITHM FOR ADDING TRI-REPORTED FACILITIES TO THE POINT SOURCE NTI

Table 2-5. These scenarios were developed so that EFIG could maintain the integrity of the relationship between various modeling parameters. Note that although Scenarios 3 and 4 indicate that the flow rate and velocity were provided to EFIG, those parameters were overruled by using default parameters in order to maintain the integrity of the relationship between the various stack parameters. However, under no circumstances were the stack height or gas temperature, when included in the NTI, replaced with default parameters;

- The default stack parameters obtained from EPA were provided at the SCC level or SIC code level. No combinations of SIC code and SCC-level stack parameters were used in filling gaps. Instead, the algorithm shown in Figure 2-2 was used to determine under which circumstances SIC code and SCC-level default parameters were used;

- Default stack parameters were available at the 8-, 6-, 4-, and 3-digit SCC level. For source categories with multilevel SCC default parameters, priority was given to the highest-level SCC for which default parameters were available;

- The TRI database did not contain information on stack parameters. For the TRI-added facilities, default stack parameters were used based on the SIC code associated with each facility listing in TRI. Not all SIC codes that appeared in the TRI database had OPPE-provided stack parameters, however. As many as 200 different SIC codes were included in the TRI data but had no SIC code-specific stack parameters;

- Each default/derived stack parameter was identified by a flag. The flags also indicate whether a certain default parameter was SIC code-based, SCC-based, or calculated using other parameters; and

- For utilities, stack parameters were obtained from the Trends Inventory (U.S. EPA, 1997).

2.5.3 How Can A Reviewer Identify the Source of the Inventory Data?

As described above, the NTI was compiled from data provided by state and local agencies and EPA's ESD, and supplemented with data from TRI that were not included in either of the two primary data sources. The NTI was then evaluated for completeness based on the modeling parameters included, and default parameters were used to fill as many gaps as possible.

Table 2-5

Description of How Default Or Derived Stack Parameters Were Added to the NTI[a]

Scenario	IF	THEN
1	Diameter, velocity, and flow rate were provided.	No default or derived parameters were added.
2	No parameters were provided.	Default parameters were added for all three variables as available.
3	Only flow rate was provided.	Default parameters were added for all three variables as available.
4	Only velocity was provided.	Default parameters were added for all three variables as available.
5	Diameter and velocity were provided.	Flow rate was derived.
6	Diameter and flow rate were provided.	Velocity was derived.
7	Velocity and flow rate were provided.	Diameter was derived.
8	Diameter was provided.	Default velocity parameters were added as available.

[a] Derived Stack Parameters = Stack parameters that were calculated by EFIG when two of the three parameters needed (diameter, velocity, and flow rate) were included in the NTI.

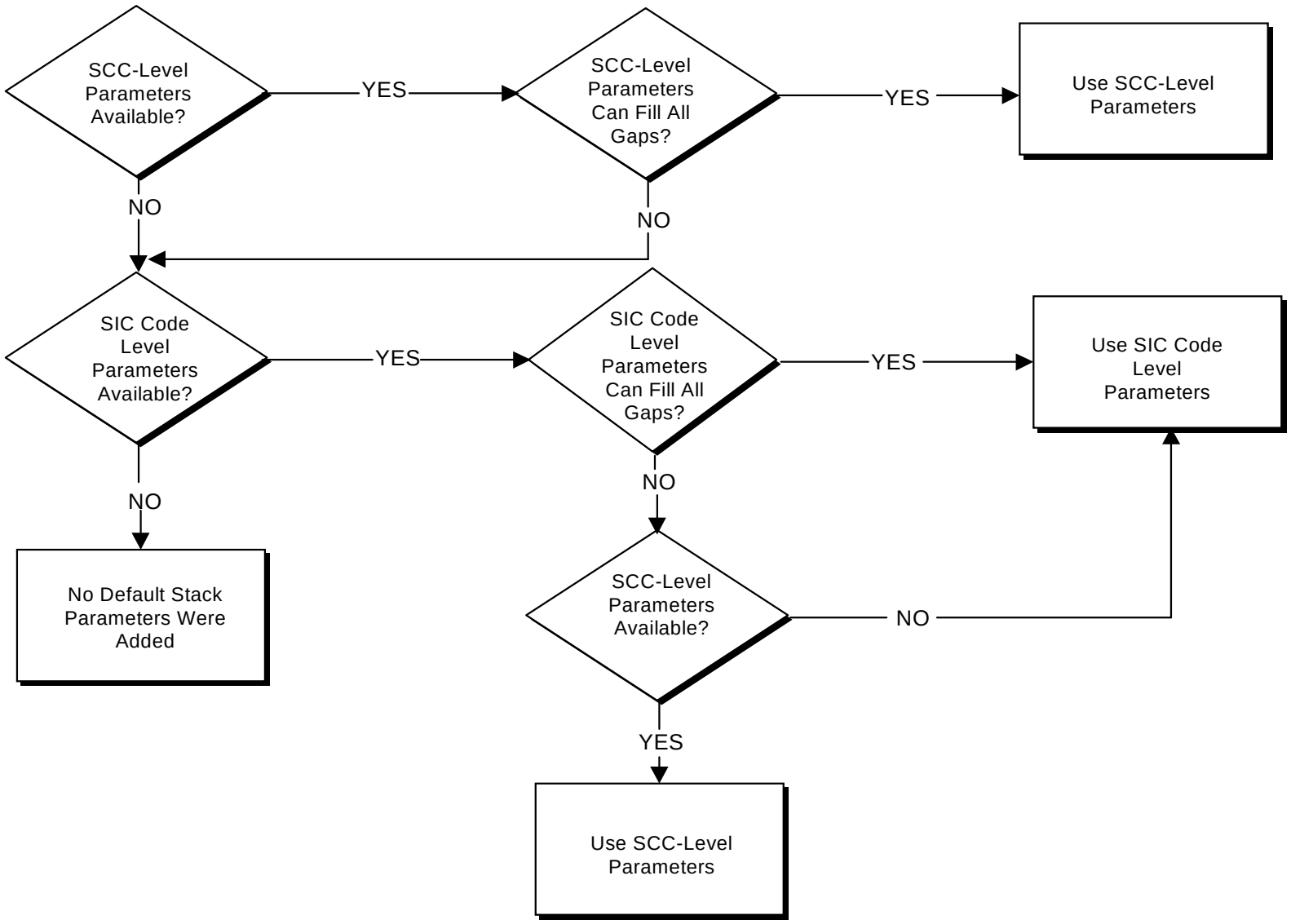

FIGURE 2-2. ALGORITHM FOR THE USE OF SCC VERSUS SIC CODE-LEVEL STACK PARAMETERS

Because the development of the NTI covered multiple data sources, EFIG felt it was important that the NTI delineate the source of the data. In the inventory files, the Transmittal table indicates where the reported emissions data originated. The following codes indicate if the data were provided by state or local agencies, ESD, or supplemented from TRI.

- Two-digit state abbreviation = State or local agency provided;
- ES or EM = ESD provided; or
- TR = Obtained from TRI.

The Emission Release Points table indicates where the reported stack data originated (i.e., if EPA defaults were added).

2.5.4 How Can A Reviewer Identify the Sources of An Assigned MACT Code?

As discussed previously, the NTI will be used in the National Air Toxics Assessment. To this end, EFIG strived to identify point sources that are, or will be, subject to MACT standards that will result in HAP emission reductions. Facilities (and in some cases, processes) are assigned a MACT code if ESD provided the data, or provided a facility list that was used to identify state/local agency and TRI data as subject to a MACT standard. The MACT codes can be found in the inventory files in the Sites and the Emission Processes tables. These tables also include fields to indicate that ESD specifically identified the site as subject to the MACT standard.

EFIG then developed an SCC/SIC code/MACT dictionary to identify other facilities in the NTI that may be subject to MACT standards. This dictionary was developed by comparing all of the SCCs and SIC codes with information on types of sources that may be subject to each MACT standard. ESD engineers then reviewed the NTI to verify or revise the facilities listed as possibly subject to MACT standards. Their comments were incorporated in the final NTI. Any

MACT assignments made using this dictionary also appear on the inventory in the Sites and Emission Processes tables and there are fields that indicate that the MACT code was assigned based on an SCC- or an SIC-code default.

2.6 External Review of the Draft NTI

To improve the quality of the draft 1996 NTI, EFIG requested the review of the inventory from state and local agencies. For point sources, reviewers were asked specifically to help identify duplicate or closed facilities that should be deleted from the NTI, add missing facilities, and fill in gaps in stack and locational data. Table 2-6 lists the state and local agencies that provided revisions to the draft point source NTI.

The agency-submitted revisions were subjected to a rigorous review process in order to ensure the internal consistency of the NTI. Specifically, the following steps were performed:

- Review the documentation provided by state/local agency to ensure that it is consistent with the actual changes to the inventory submitted;
- Verify that the add/revise/delete designations of the agency-submitted records are accurate (e.g., a record designated for addition is not in fact a revision to an existing record);
- Verify that the added pollutants were HAPs; and
- Verify that the added pollutants are assigned the correct (or a valid) CAS number.

For the most part, revisions provided by state and local agencies were incorporated to produce this final inventory. When questions arose over specific revisions, the reviewers were contacted by EFIG. EFIG also evaluated all deletions to determine whether or not to process them. This process involved determining whether the facilities were operating in 1996, and evaluating the HAPs emitted from the facilities recommended for deletion. Because TRI data are

Table 2-6

States and Localities Providing Point Source NTI Revisions

Alabama Department of Environmental Management
California Air Resources Board
Lake County, California, Air Quality Management Division
Colorado Air Pollution Control Division
Connecticut Department of Environmental Protection
Delaware Department of National Resource and Environmental Control
Florida Department of Environmental Management
Pinellas County, Florida, Department of Environmental Management
Hillsborough County, Florida, Environmental Protection Commission
Jacksonville, Florida, Air and Water Quality Division
Georgia Environmental Protection Department of Natural Resources
Idaho Department of Environmental Quality
Illinois Environmental Protection Agency
Indiana Department of Environment Protection
Iowa Department of Natural Resources
Kansas Department of Health and Environment
Kentucky Division of Air Quality
Louisiana Department of Environmental Quality
Maryland Department of Environment
Maine Department of Environmental Protection
Massachusetts Department of Environmental Protection
Minnesota Pollution Control Agency
Missouri Department of Natural Resources

Table 2-6

States and Localities Providing Point Source NTI Revisions (Continued)

North Carolina Department of Environment and Natural Resources
Mecklenburg County, North Carolina, Department of Environmental Protection
North Dakota Department of Health
Lincoln-Lancaster County, Nebraska, Health Department
New Hampshire Department of Environmental Services
New Jersey Department of Environmental Protection
New York Department of Environmental Control
Dayton, Ohio, Regional Air Pollution Control Agency
Oregon Department of Environmental Quality
Lane County, Oregon, Regional Air Pollution Authority
Allegheny County, Pennsylvania, Health Department
Philadelphia, Pennsylvania, Air Management Services
Puerto Rico Department of Natural Resources and Environment
Rhode Island Department of Environmental Management
South Carolina Department of Health and Environmental Control
South Dakota Department of Environmental and Natural Resources
Tennessee Division of Air Pollution Control
Davidson County, Tennessee, Air Pollution Control Division
Hamilton County, Tennessee, Air Pollution Control Bureau
Texas Natural Resource Conservation Commission
Utah Division of Air Quality
Virgin Islands Department of Planning and Natural Resources
Virginia Department of Environmental Quality
Washington Department of Ecology

Table 2-6

States and Localities Providing Point Source NTI Revisions (Continued)

Wisconsin Department of Natural Resources
West Virginia Department of Environmental Protection
Wyoming Department of Environmental Quality

reported by facilities, TRI data were not deleted unless the state could verify closure of the facilities. Each agency that provided revisions to the NTI will be provided with a summary of how their revisions were handled in the final NTI.

3.0 NATIONAL TOXICS INVENTORY COMPLETENESS CHECK

To evaluate the completeness of the NTI, EFIG first compared the number of facilities in the NTI (the combined state and ESD databases with TRI additions) with the number of facilities that reported data for the TRI, and with the number of facilities included in the Trends Inventory (U.S. EPA, 1997). Table 3-1 presents the results of this comparison by state.

A total of 13,338 facilities reported data for the TRI for 1996. The number of facilities reporting HAP emissions in excess of the 10 or 25 tpy major source cutoff is 4,424, or 33 percent. Overall, TRI major source facilities account for only 11 percent of the facilities in the 1996 NTI.

Table 3-1 also shows that the number of facilities included in the 1996 Trends Inventory is 61,568, and the number of facilities included in the NTI is 40,997. For the 41 states that provided toxics inventories and/or revisions, the numbers of facilities included in the 1996 Trends Inventory and the NTI are slightly closer. For these 41 states, the Trends Inventory includes 56,326 facilities and the NTI includes 39,690. For states that were unable to provide their toxic inventories to EFIG, the 1996 Trends Inventory includes four times the number of facilities as the NTI.

Based on these initial comparisons, it can be concluded that the use of state- and ESD-submitted inventories result in more complete facility coverage than if only TRI was the main source of data. While this conclusion is not surprising, it helps to put the value of TRI-reported emissions into perspective.

In the second phase of the NTI completeness check, EFIG compared the number of counties covered in the NTI with number of counties that had TRI-reporting facilities, and with the number of counties included in the Trends Inventory. Table 3-2 presents the results of this comparison by state.

Table 3-1

Facility Count Summary

State	Number of Unique Facilities in the NTI	Number of Major Source Facilities Included in TRI	Number of Unique Facilities in Trends Inventory
AK*	16	3	28
AL	240	151	811
AR	301	99	114
AZ	244	24	309
CA	7,416	176	18,870
CO	3,424	20	4,645
CT	68	49	660
DC*	1	0	14
DE	48	18	87
FL	359	102	509
GA*	240	158	417
HI*	16	3	155
IA*	138	101	63
ID	56	6	21
IL	8,813	220	9,713
IN	1,587	287	1,321
KS	150	75	1,963
KY	250	98	370
LA	301	89	664
MA	311	55	495
MD	730	35	439
ME	144	20	223
MI*	341	168	1,966
MN	210	103	696

Table 3-1

Facility Count Summary (Continued)

State	Number of Unique Facilities in the NTI	Number of Major Source Facilities Included in TRI	Number of Unique Facilities in Trends Inventory
MO	791	116	758
MS	150	104	131
MT*	28	10	217
NC	2,369	230	925
ND	56	11	65
NE	290	40	704
NH	53	13	184
NJ	148	62	864
NM	34	6	299
NV*	12	4	109
NY	3,528	103	1,584
OH*	421	275	1,900
OK*	94	71	373
OR	187	61	395
PA	586	206	977
RI	505	15	110
SC	406	116	489
SD	24	16	22
TN	502	193	588
TX	2,426	288	1,203
UT	137	24	333
VA	1,460	137	2,299
VT	86	3	126
WA	269	66	276
WI	744	147	1,585

Table 3-1

Facility Count Summary (Continued)

State	Number of Unique Facilities in the NTI	Number of Major Source Facilities Included in TRI	Number of Unique Facilities in Trends Inventory
WV	172	39	229
WY	115	8	270
TOTAL	**40,997**	**4,424**	**61,568**

* No point source data or revisions received from the state.

Table 3-2

County Coverage

State	Number of Counties Covered in the NTI	Number of Counties Covered in TRI	Number of Counties Covered in Trends	Number of Counties in the State
AK*	8	2	7	25
AL	54	44	66	67
AR	56	42	45	75
AZ	9	5	14	15
CA	53	28	57	58
CO	57	11	61	63
CT	8	8	8	8
DC*	1	0	1	1
DE	3	3	3	3
FL	53	36	46	67
GA*	82	73	90	159
HI*	4	1	4	5
IA*	54	49	26	99
ID	24	5	16	44
IL	102	52	102	102
IN	89	70	89	92
KS	58	38	105	105
KY	56	44	67	120
LA	53	31	60	64
MA	13	9	14	14
MD	23	11	23	24
ME	15	11	16	16
MI*	62	51	81	83
MN	54	45	85	87

Table 3-2

County Coverage (Continued)

State	Number of Counties Covered in the NTI	Number of Counties Covered in TRI	Number of Counties Covered in Trends	Number of Counties in the State
MO	87	47	99	115
MS	49	43	50	82
MT*	14	6	45	57
NC	98	62	79	100
ND	24	9	22	53
NE	56	20	79	93
NH	10	7	10	10
NJ	21	16	21	21
NM	15	6	27	33
NV*	6	3	16	17
NY	62	36	60	62
OH*	74	68	84	88
OK*	35	29	65	77
OR	32	23	33	36
PA	56	46	64	67
RI	5	4	5	5
SC	43	33	45	46
SD	11	8	8	66
TN	71	58	72	95
TX	203	85	150	254
UT	21	9	25	29
VA	106	56	101	136
VT	13	3	13	14
WA	22	17	29	39

Table 3-2

County Coverage (Continued)

State	Number of Counties Covered in the NTI	Number of Counties Covered in TRI	Number of Counties Covered in Trends	Number of Counties in the State
WI	66	49	71	72
WV	44	17	48	55
WY	20	5	22	23
TOTAL	**2,255**	**1,434**	**2,429**	**3,141**

* No point source data or revisions received from the state.

A total of 1,434 counties are included in the 1996 TRI reporting. The NTI includes 2,255 counties. Table 3-2 shows that a total of 2,429 counties are listed in the 1996 Trends database, representing 77 percent of all U.S. counties. This compares to 72 percent of all U.S. counties being listed in the NTI.

Based on these initial comparisons, it can be concluded that the use of state- and ESD-submitted inventories result in more complete geographic coverage of than if only TRI was the main source of data.

4.0 COMPILING THE INVENTORY DATA INTO THE NTI DATABASE

A substantial amount of air toxics data were received from the various state and local agencies and ESD lead engineers who responded to the data requests made for this project. The form and content of inventory data provided to EFIG varied tremendously. One of the goals of this project was to process all the state- and ESD-supplied inventory data into a common structure with consistently defined data fields. A common data structure will help end users define standardized approaches to reviewing and using the data. However, any regional or national analysis will still rely to a great extent on the specific methods and protocols used by the state and local agencies, the EPA, or any other groups providing the original emissions data. Future updates and improvements to these inventories will depend on the continued transfer of data from the state and local agencies to EPA and other end users. Since many states and local agencies are in the process of building and designing more formal air toxics databases, it is expected that more agencies will be in a position to respond to similar data requests in the future.

4.1 Creating a Common Data Structure

Because an essential part of this task was to format the diverse variety of inventory data received from the state and local agencies and ESD into a common structure, it was decided that the EPA's Oracle®-based NET platform served this purpose the best. The final objective was to have all of the inventory data in a common data structure (i.e., the NET-Oracle® platform) that could serve multiple end users. The NET-Oracle® platform as designed by EPA allows for a variety of data transfer mechanisms to be used and is flexible enough to be supported by many different database programs.

The specific data structure for the NET-Oracle® platform used in this project is based on the Phase I Data Model developed by the Emission Inventory Improvement Program (EIIP) Data Management Committee (DMC). The Data Model as developed by the EIIP DMC is intended to serve as the blueprint for the development of an electronic data transfer format that can be used

to transfer data between individual facilities, state and local agencies, and the EPA. The Data Model was also designed to support all the emissions data needed for regional air quality modeling.

The basic structure of the EIIP Data Model as adapted for this project is shown in Figure 4-1. The figure shows the organization and relationship of the data elements to each other. The structure selected for this project represents the point source hierarchy in the Data Model (i.e., the highest level represents the site, or plant, followed by the emission unit level, the process level, and the emissions associated with each process). There are other options and available data fields in the EIIP DMC Data Model; however, the entities shown in Figure 4-1 were selected for this project because they meet the primary objectives of the project and because they could be completed with the resources available for this project. More detailed information about the EIIP Data Model, how it was designed, and what other options are available can be found in the documentation report for the EIIP Data Model development (EIIP, 1999), which is also available via *http//www.epa.gov/oar/oaqps/eiip/*.[*]

4.2 Formatting the State Databases

An overview of the main processing steps used to format the state, ESD, and TRI inventory data is shown in Figure 4-2. The processing involved the following:

1. Converting the original data as received to an Microsoft® Access database template;

2. Converting the Microsoft® Access database templates into the NET format; and

[*]Emission Inventory Improvement Program. 1999. Chapter 1: EIIP Phase I Data Model. In: *EIIP Volume VII, Data Management Procedures*. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, EPA-454/R-97-004g, July 1997. Research Triangle Park, North Carolina.

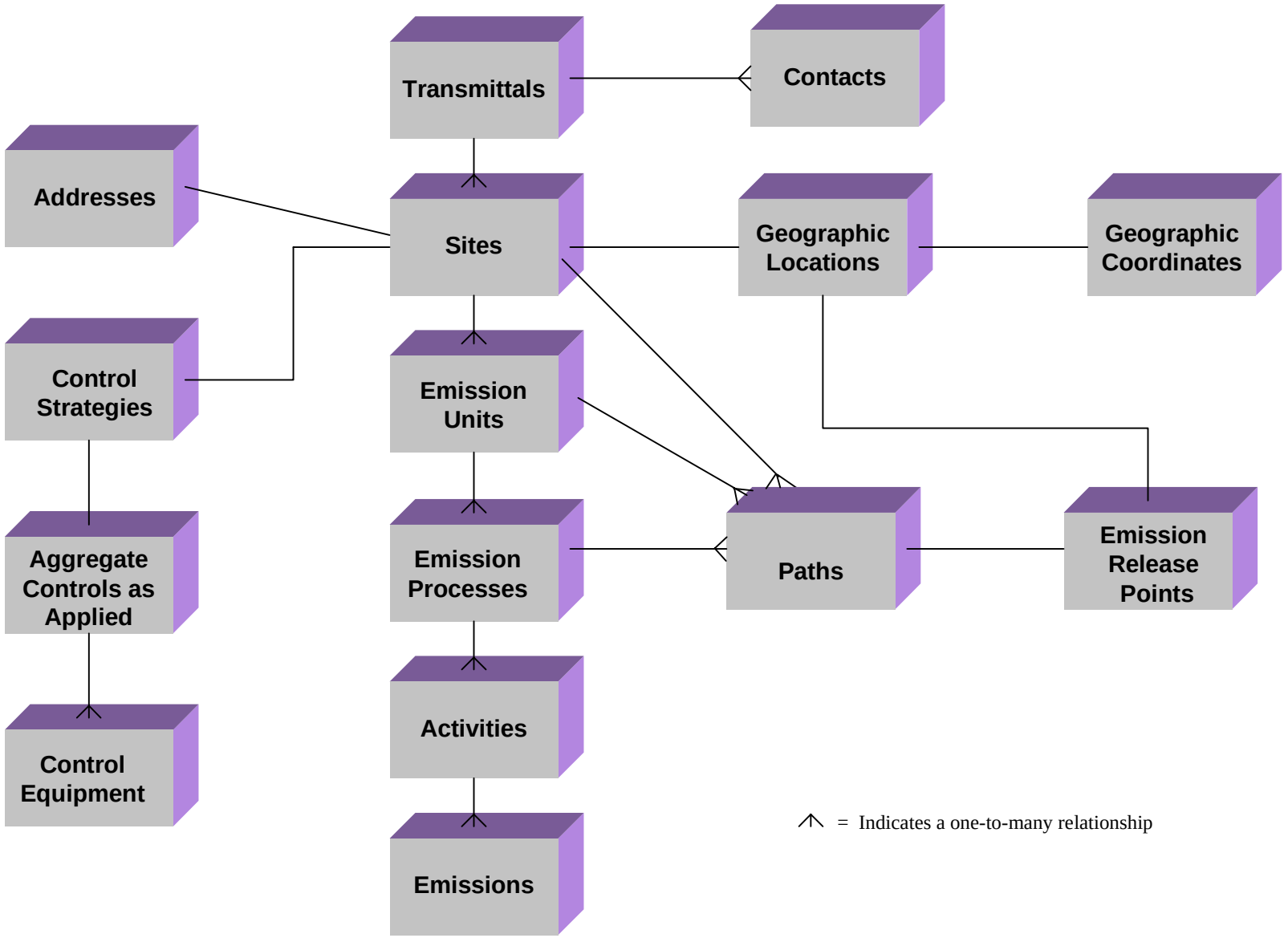

FIGURE 4-1. PORTION OF EIIP DATA MODEL AS ADAPTED FOR THE NTI

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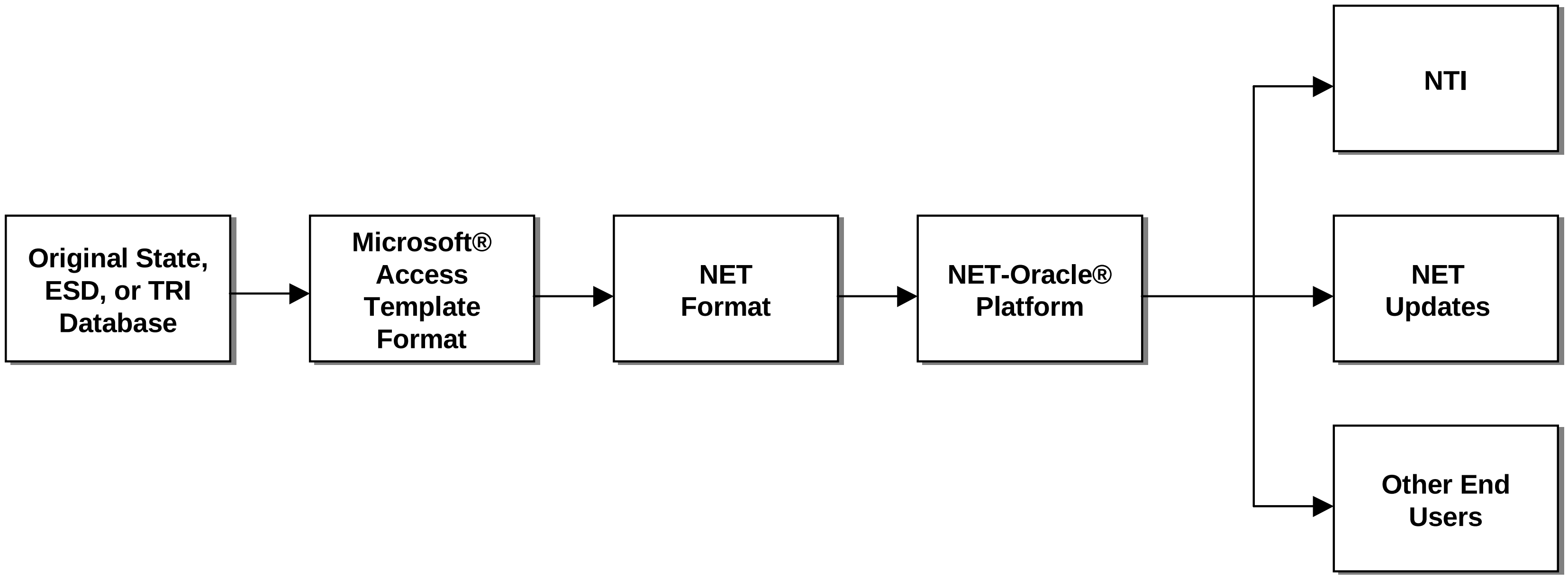

FIGURE 4-2. MAIN PROCESSING STEPS USED TO FORMAT NATIONAL TOXICS INVENTORY DATA

3. Transferring the data to the NET-Oracle® platform.

Within each of these steps, a number of important processing procedures were used to compile the data to match the objectives of this project and to put the data into the NET-based structure. Some of the main processing procedures that were used are highlighted below.

In requesting inventory data from the states and ESD, the objective was to obtain information down to the process-level emissions. It became evident upon receiving the inventory data, however, that the information required to fill all levels of the Data Model as shown in Figure 4-1 was not available in every database provided to EFIG. The Data Model, however, as adapted for this project, is sufficiently flexible to allow inputs at different levels depending on the availability of data in the original database. For example, if only plant-level emissions are known, the user can enter site information and emission totals for the plant, with no entries for the emission unit or process entities. This was identified as another reason for selecting the EIIP Data Model format, since it could be adapted to the different levels of data received.

Several processing and screening steps were initially performed on each of the state databases as they were received. These steps included:

- Transferring the data to a Microsoft® Access database format;
- Removing nonapplicable base year records;
- Removing duplicate records;
- Removing records that had zero emissions; and
- Screening for records that contain pollutants on the list of the 188 CAA HAPs.

These initial steps helped to reduce the NTI to only those records that would be applicable to this project and made them more manageable from a processing standpoint. The transfer to a Microsoft® Access format was done for two reasons: first, it allowed the data to be more easily processed because of the variety of sorting and filtering functions available in Microsoft® Access; second, it moved the data to a database structure that constituted the initial step in uploading the data to the final Oracle®-based NET platform.

The next major step in the data processing was the field-by-field mapping to each of the data attributes available in the Data Model structure. To do this, it was necessary to match all the applicable data fields from each of the state and ESD databases to a corresponding data attribute in the Data Model structure. This required a clear definition of the data fields as received from the state or local agency or ESD. Some of these were obvious, such as the use of SCCs; others were not as clear, such as the use of multiple identification codes for sites and processes. As shown in Appendix F, EFIG requested ESD data in a specific set of templates that greatly facilitated this step. Thus, the ESD data provided to EFIG as well as the state databases that originated in AIRS (which contain common field names with known definitions from the AIRS data dictionary) had much less variety in the nomenclature and coding schemes than other databases provided to EFIG.

Because of the variety in nomenclature and coding schemes in some of the state databases, there was not always a clear one-to-one match between a state or ESD data field and the Data Model attribute. A prioritized mapping scheme was developed so that each of the databases could be reformatted to the Data Model structure using whatever available data were provided.

A worksheet was developed to prioritize and guide staff through the mapping process. A copy of the worksheet is provided in Appendix D. The worksheet identifies “Mandatory” and “If Provided” data fields. The mandatory data fields are ones that had to be present in the database to proceed to the Data Model format. If a mandatory field was not present in the

original database, every effort was made to obtain the missing data field or to create it based on available information in the database. Some of these fields were directly available from the original databases as received (e.g., site name). Others were developed from information provided in the original database (e.g., Federal Information Procedures System or FIPS codes were generated from county names; pollutant CAS numbers were assigned based on pollutant names). Others were added fields, such as the start date time and end date time.

Data fields identified as "If Provided" are those fields that were identified to be mapped to Data Model attributes if they were readily available in the original database or they could be easily created using available information in the database (e.g., creating a unique site code by concatenating a facility identification number with a county code). However, no significant resources were to be used to create these fields. For example, if local control device identification codes were provided in the original database, these codes could be assigned to the "local_device_type_code_1" field in the Data Model as designed for this project. If local control devices codes were not present in the original database, however, they were not created as part of this project. It is possible that in future edits or updates to this inventory, it may be useful to reassess whether certain data fields identified as "If Provided" may justify a higher priority for inclusion.

The end result of the mapping process was a Microsoft® Access file for each state database containing field names identical to those in the Data Model template. A summary of each of the state databases initially received for the draft NTI and the major modifications performed in creating the template files for each is provided in Appendix E. These summaries only present the major processing steps; there were many more detailed processing steps that can be found in the actual Microsoft® Access files created for each database. Information on revisions to the draft NTI will be provided individually to state and local agency reviewers.

Appendix A

STAPPA/ALAPCO Survey

Dear State and Local Air Toxics Regulators:

EPA is beginning to work on the implementation of the residual risk requirements mandated by Section 112(f) of the clean Air Act. In order to understand the residual risks that a source or source category may present after implementing MACT, it is necessary to know what toxics air pollutants they emit. The best sources of the type of information EPA needs for this effort are the state and local regulatory agencies who work most closely with the facilities.

The following is a short survey developed by STAPPA, ALAPCO and EPA. It attempts to gather information about which state and local air agencies collect air toxics emission data and what types of data they have. IT DOES NOT ACTUALLY REQUEST THAT YOU SUBMIT THE DATA! It is merely an attempt to determine what information may be available. The questionnaire also asks that you provide the name of a person to contact if we need follow-up information--someone familiar with your agency's air toxics efforts as a whole and who can direct us to specific technical staff people, if needed.

Please send your responses to Mary Sullivan Douglas of STAPPA/ALAPCO at m4clnair@sso.org by June 2, 1997. Thank you for your participation!

If you have questions about this survey in general, please direct them to Carol Piening, Washington State Department of Ecology, Air Quality Program. email: cpie461@ecy.wa.gov phone: (360) 407-6858 fax: (360) 407-6802.

If you have questions about the ambient air quality portion of the survey, please direct them to James Hemby, EPA, OAQPS email: hemby.james@epamail.epa.gov (919) 541-5459 (voice) (919) 541-1903 (fax).

***AIR TOXICS DATA SURVEY - May, 1997 ***

DEFINITIONS:

For the purposes of this survey, please consider the following definitions:

TOXIC CHEMICAL - any chemical on the list of hazardous air pollutants found in Section 112(b) of the Clean Air Act.

SOURCE or SOURCE CATEGORY - a source category listed by EPA for development of MACT standards pursuant to Section 112(c) of the Clean Air Act. Categories of AREA sources include chrome electroplaters, dry cleaners, commercial sterilization facilities, halogenated solvent cleaners, and secondary lead smelting. MOBILE sources includes both on-road and off-road vehicles.

BENCHMARK - the guidelines or standards currently in use by your state or local agency.

PART 1: SOURCE CHARACTERISTICS:

In general, for what kinds of sources do you collect source characteristics information? (X all that apply)

Point ___
Area ___
Mobile ___
Some specific-source categories___

In general, how often are data for a particular source reported?
ie. annually _____

Does your agency collect emission point information? Yes ____ No ____

Does your agency collect emission unit information? (X that all apply)

Stack height: Yes _____ No_____
Inside diameter: Yes ____ No____
Exit temperature: Yes ____ No____
Exit velocity: Yes ____ No____
Distance(s) to property line: Yes ____ No____
Geographical location: Yes ____ No____ (e.g. latitude and longitude for GIS applications)
Emission rates: Yes ____ No____
Maximum hourly emission rate: Yes ____ No____

Are facility data coded by (X that all apply)

SCC___
AMS___
SIC___
Plant or facility ID: name _____ , address _____ , ID _____ , FIPS country codes _____

In general, how accurate and complete are the data collected?

1 (poor) _____ 2 _____ 3 _____ 4 _____ 5 (good) _____

PART 2: TOXIC CHEMICAL CHARACTERISTICS

Does your agency collect information for toxic chemical emissions by CAS number?

Yes _____ No _____ On a case-by-case basis.

In what units are the toxic chemical emissions information? (X all apply)

Lb/hour _____
Lb/year _____
Kg/hour _____

Kg/yr _____
Other _____

PART 3: RISK ASSESSMENT INFORMATION

Has your agency performed or evaluated any risk assessments on source categories?
_____ yes - approximate number: _____ No _____

Has your agency performed or evaluated any risk assessments on individual sources within those source categories?
_____ yes - approximate number: _____ No _____

What type of benchmarks are used by your agency for cancer endpoint evaluations? (X all that apply)

Cancer: EPA unit risk values _____
State/local unit risk values _____
Both _____
Cancer unit risk value not used _____
Derived from occupational guidelines _____

If your cancer benchmarks are derived from occupational guidelines, what factors do you apply to them? _____

What type of benchmarks are used by your agency for non-cancer endpoint evaluations? (X all that apply)

Non-cancer: EPA reference concentration/reference dose _____
State-derived (NOAEL/LOAEL approach) _____
Derived from occupational guidelines _____

If your non-cancer benchmarks are derived from occupational guidelines, what factors do you apply to them? _____

What averaging period is used for your benchmarks? (X all that apply)

Annual ____
24 hour ____
8 hour ____
1 hour ____
Other _____

PART 4: AMBIENT DATA

Has your agency collected any ambient data on air toxics?

Yes ____ No ____

Are these monitoring efforts best characterized as
Special studies directed at particular sources ____
Characterizations of representatives ambient conditions ____
Both ____

What option(s) below best describes the duration of the monitoring effort
One year ____ (please indicate year ____)
Multi-years ____ (please indicate years _____)
Ongoing ____ (please indicate initial year _____)
Other ____

Does your agency have plans to conduct any ambient toxics monitoring in the future?
Yes ____ No ____

If yes, please provide a brief description (objectives, duration, etc.). Ongoing, as part of ozone precursor study.

PART 5: DATA ACCESSIBILITY
Is the data available in a computerized file format? (i.e., ASCII, spreadsheet, database files?)

Source Characterization data Yes ____ Some _____ No ____

Chemical Characteristic data Yes ____ Some _____ No ____

Risk Assessment information Yes ____ Some _____ No ____

Ambient data Yes ____ Some _____ No ____

Are/were ambient data submitted to the Aerometric Information Retrieval =
System (AIRS) database?
Yes ____ No ____

Are the data accessible via the Internet?
Yes ____ No ____

Is the data organized in a central location, or dispersed among several people in your agency?
Centralized ____ Dispersed _____

PART 6: ONE CONTACT PERSON

If there are follow-up questions about your air toxics program and the data you have collected, who would be the appropriate primary contact?

Name and title:
Agency and organization:
Mailing address:
Phone:
Fax
E-mail:

YOU ARE FINISHED WITH THIS SURVEY! Please send your responses, electronically if possible, to Mary Sullivan Douglas of STAPPA/ALAPCO.
email: m4clnair@sso.org
phone: (202) 624- 7864
fax: (202) 624-7863

THANK YOU for your time and assistance. This information will be compiled and made available to state and local air pollution control agencies, EPA regional offices, and EPA headquarters. As we get a better idea of what information we need, and who has more information available, we will likely ask the contact person for additional help.

Appendix B

Telephone Survey

Questions for Phone Calls to State/Local Air Toxics Contacts

1) Do you compile air toxics inventories?

2) Do you have air toxics inventory data in AIRS? *If "yes",*

a) Do you have 1996 base year data? If not, what is the most recent base year that you do have? How often is it updated?

b) Are emissions "actuals", "permitted", "potential", etc.?

c) What pollutants are covered by the inventory?

d) What source types are covered by the inventory?

point?
area?
on-road mobile?
non-road mobile?

e) What geographic area is covered by the inventory?

If there are NO air toxics data in AIRS: **Are there any problems in particular that you have encountered in trying to put toxics data into AIRS? (e.g., not enough staff, system transfer problems, etc.)? If you are interested in EPA assistance in uploading your air toxics data to AIRS, please contact the following person:**

Lillian Bradley
EPA/OAQPS
Mail Drop 12
Research Triangle Park, North Carolina, 27711
Phone # (919) 541-5694

3) Do you have air toxics inventory/permit data in some other electronic format (e.g., state maintained database)? *If "yes",*

a) Do you have 1996 base year data? If not, what is the most recent base year that you do have? How often is it updated?

b) What pollutants are covered by the inventory?

c) What source types are covered by the inventory?

-point sources?
-area sources?
-onroad mobile sources?
-nonroad mobile sources?

d) Are emissions "actuals", "permitted", "potential to emit", etc.?

e) How are point sources coded (by SCC, by SIC, etc.)? Do you have codes to identify area or mobile sources as well?

f) Does the point source data include facility site location (latitude/longitude) and stack parameters (e.g., stack height, diameter, exit temperature, exit velocity, etc.)

g) Are there emission thresholds for reporting point sources? What are they?

h) What geographic area is covered by the inventory?

i) What is the electronic format of the inventory data (e.g., ACCESS database, dBASE, etc.)?

j) Is it possible for you to transfer the inventory data in electronic format to us?

4) Would it be possible to visit your agency to obtain the air toxics inventory data if necessary? Can the air toxics inventory data be scanned or copied?

5) What is the basis for the quality rating given to the data in the STAPPA/ALAPCO survey?

6) Do you use facility emissions reported under EPA's Toxics Release Inventory (TRI) requirements as part of your air toxics inventory? If not, have you checked the correlation between air toxic emissions for facilities in your database versus what is reported in TRI for those facilities?

7) Is there a common link between the facility identification codes used in your air toxics inventory and those used in AIRS? Those used in the NET? TRI?

Appendix C

List of Data Fields Retrieved from AIRS

List of Data Fields Retrieved from AIRS

AIRS-ACRONYM	AIRS-ELEMENT NAME[a]	AIRS-FILE NAME
PLANT GENERAL		
PLNT	PLANT ID	PLANT GENERAL
PEPA	EPA PLANT IDENTIFICATION NUMBER	PLANT TABLE
PNME	PLANT NAME	PLANT GENERAL
CNTY	COUNTY CODE	PLANT TABLE
LAT1	LATITUDE COORDINATE	PLANT GENERAL
LON1	LONGITUDE COORDINATE	PLANT GENERAL
UTH1	PLANT UTM HORIZONTAL COORDINATE	PLANT GENERAL
UTV1	PLANT UTM VERTICAL COORDINATE	PLANT GENERAL
UTZ1	UTM ZONE	PLANT GENERAL
SIC1	PRIMARY INDUSTRIAL CLASS CODE	PLANT GENERAL
YINV	YEAR OF-EMISSION-INVENTORY	PLANT GENERAL
DSCI	PLANT DESCRIPTION	PLANT GENERAL
STAB	STATE ABBREV	PLANT TABLE
STACK GENERAL		
PLNT	PLANT ID	PLANT GENERAL
STNB	STACK NUMBER	STACK GENERAL
STDM	STACK DIAMETER	STACK GENERAL
STET	STACK EXIT GAS TEMPERATURE	STACK GENERAL
STEV	STACK EXIT GAS VELOCITY	STACK GENERAL
STFR	STACK GAS FLOW RATE	STACK GENERAL
STHT	STACK HEIGHT	STACK GENERAL
LAT2	LATITUDE COORDINATE	STACK GENERAL
LON2	LONGITUDE COORDINATE	STACK GENERAL
UTH2	STACK UTM HORIZONTAL COORDINATE	STACK GENERAL
UTV2	STACK UTM VERTICAL COORDINATE	STACK GENERAL
DSC2	STACK DESCRIPTION	STACK GENERAL
SEGMENT GENERAL		
PLNT	PLANT ID	PLANT GENERAL
STNB	STACK NUMBER	STACK GENERAL
PNUM	POINT NUMBER	POINT GENERAL
SEGN	SEGMENT NUMBER	SEGMENT GENERAL
DSC4	SEGMENT DESCRIPTION	SEGMENT GENERAL
SCC8	SOURCE CLASSIFICATION CODE	SEGMENT GENERAL

List of Data Fields Retrieved from AIRS (Continued)

PLANT POLLUTANT

PLNT	PLANT ID	PLANT GENERAL
CAS1	CHEMICAL ABSTRACT SERVICE NUMBER	PLANT POLLUTANT
PLL1	POLLUTANT ABBREV	PLANT POLLUTANT
EEA1	ESTIMATED WO EMISSIONS VALUE	PLANT POLLUTANT
UEA1	ESTIMATED WO EMISS UNITS	PLANT POLLUTANT
EES1	ESTIMATED W EMISSIONS VALUE	PLANT POLLUTANT
UES1	ESTIMATED W EMISS UNITS	PLANT POLLUTANT
EAU1	ACTUAL UCTRL EMISSIONS VALUE	PLANT POLLUTANT
UAU1	ACTUAL UNCONTROL EMISSIONS UNITS	PLANT POLLUTANT
EPU1	POTENTIAL UCTRL EMISSIONS VALUE	PLANT POLLUTANT
UPU1	POTENTIAL UCTRL EMISSIONS UNITS	PLANT POLLUTANT
EPC1	POTENTIAL CNTRL EMISSIONS VALUE	PLANT POLLUTANT
UPC1	POTENTIAL CNTRL EMISSIONS UNITS	PLANT POLLUTANT

SEGMENT POLLUTANT

PLNT	PLANT ID	PLANT GENERAL
STNB	STACK NUMBER	STACK GENERAL
PNUM	POINT NUMBER	POINT GENERAL
SEGN	SEGMENT NUMBER	SEGMENT GENERAL
CAS4	CHEMICAL ABSTRACT SERVICE NUMBER	SEGMENT POLLUTANT
PLL4	POLLUTANT ABBREV	SEGMENT POLLUTANT
EEA4	ESTIMATED WO EMISSIONS VALUE	SEGMENT POLLUTANT
UEA4	ESTIMATED WO EMISS UNITS	SEGMENT POLLUTANT
EES4	ESTIMATED W EMISSIONS VALUE	SEGMENT POLLUTANT
UES4	ESTIMATED W EMISS UNITS	SEGMENT POLLUTANT
EAU4	ACTUAL UCTRL EMISSIONS VALUE	SEGMENT POLLUTANT
UAU4	ACTUAL UNCONTROL EMISSIONS UNITS	SEGMENT POLLUTANT
EME4	MEASURED EMISSIONS VALUE	SEGMENT POLLUTANT
UME4	MEASURED EMISSIONS UNITS	SEGMENT POLLUTANT
EPU4	POTENTIAL UCTRL EMISSIONS VALUE	SEGMENT POLLUTANT
UPU4	POTENTIAL UCTRL EMISSIONS UNITS	SEGMENT POLLUTANT
EPC4	POTENTIAL CNTRL EMISSIONS VALUE	SEGMENT POLLUTANT
UPC4	POTENTIAL CNTRL EMISSIONS UNITS	SEGMENT POLLUTANT
CTL1	PRIMARY-CONTROL-EQUIPMENT	POLLUTANT SEGMENT
CTL2	SECONDARY-CONTROL-EQUIPMENT2	POLLUTANT SEGMENT
CLEE	CONTROL-EQUIPMENT-EFFICIENCY	POLLUTANT SEGMENT

MACT COMPLIANCE REPORT

PLNT	PLANT ID	PLANT GENERAL

List of Data Fields Retrieved from AIRS (Continued)

SPT1	SUBPARTS 1-9 -- Indicates Subpart that applies to facility AIR PGM PLANT

[a] Repeated AIRS Element Names indicate fields that were used to link data from various tables.

Appendix D

Worksheet for Processing State Databases

Worksheet for Processing State Databases

Project Data Element List	**ERG DATA TEMPLATE COLUMN NAME(S)**	Requirement Status for Inventory	Contents
Facility Name	site_name	Mandatory	Text
	source_type	Mandatory	Code (“POINT” for point sources) from Table 15.
	state_local_site_id_code	If provided	State Facility ID
	federal_id_code_2	If provided	TRIS facility identification number or other EPA id code
	federal_id_code_2_desc	If provided	Description of EPA code provided in above. (eg. “TRIS”)
Facility ID	airs_plant_id	If provided	AIRS Plant ID
Facility SIC	sic	If provided	FTC SIC
	address_type_code	Mandatory if FIPS county is unknown.	Code (“01” for physical address) from Table 14.
	zipcode	Mandatory if FIPS county is unknown.	USPS Zip Code of Site
	country_fips	Mandatory	FIPS Country Code (“00” for USA)
	state_fips	Mandatory	FIPS State Code from Supplemental Table 17.

Worksheet for Processing State Databases (Continued)

Project Data Element List	**ERG DATA TEMPLATE COLUMN NAME(S)**	Requirement Status for Inventory	Contents
	county_fips	Mandatory	FIPS County Code from Supplemental Table 18.
	site_xy_coord_type	If provided	NET Code (“UTM” or “LATLON”) from Table 9.
Facility Latitude	site_y_coordinate	If provided	Latitude in DDDMMSS format or UTM Northing (km)
Facility Longitude	site_x_coordinate	If provided	Longitude in DDDMMSS format or UTM Easting (km)
	site_utm_zone	If UTM provided	UTM Zone
	AIRS_point_id	If provided	AIRS Point ID
	state_local_emis_unit_id	If provided	
	emis_unit_description	If provided	text
	stack_xy_coord_type	If provided	NET Code (“UTM” or “LATLON”) from Table 9.
	stack_y_coordinate	If provided	Latitude in DDDMMSS format or UTM Northing (km)

Worksheet for Processing State Databases (Continued)

Project Data Element List	**ERG DATA TEMPLATE COLUMN NAME(S)**	Requirement Status for Inventory	Contents
	stack_x_coordinate	If provided	Longitude in DDDMMSS format or UTM Easting (km)
	stack_utm_zone	If UTM provided	UTM Zone
Process Description	scc	Mandatory if process-level emissions data are provided	EPA SCC
	ams	Only for Area/Mobile sources	EPA AMS Code
	segment_id	If provided	AIRS Segment ID
	state_local_process_id	If provided	State/local process-level identification code
	process_description	Mandatory if process-level emissions data are provided and no SCC can be assigned.	Text
	start_date_time	Mandatory	YYYYMMDD format. See EIIP Appendix 1.D-2
	end_date_time	Mandatory.	YYYYMMDD format. See EIIP Appendix 1.D-2

Worksheet for Processing State Databases (Continued)

Project Data Element List	**ERG DATA TEMPLATE COLUMN NAME(S)**	Requirement Status for Inventory	Contents
	process_rate_throughput	If provided	Numeric value
	throughput_method	If provided	NET Code from Table 1.
	throughput_units	If provided	Text
	emission_release_point _type	Mandatory	NET Code from Table 5.
	federal_id_code	If provided	AIRS Stack ID
	local_stack_id	If provided	State Stack ID
Stack Height	stack_height	If provided	Numeric value in ft
Stack Diameter	stack_diameter	If provided	Numeric value in ft
Stack Exit Velocity	exit_gas_velocity	If provided	Numeric value in feet per second
Stack Temperature	exit_gas_temperature	If provided	Numeric value in degrees F
	exit_gas_flow_rate	If provided	Numeric value in cubic feet per minute
Horizontal-Dimension (non-stack)	Nonstack_horiz _dimension	If provided for fugitive emissions	Numeric value

Worksheet for Processing State Databases (Continued)

Project Data Element List	**ERG DATA TEMPLATE COLUMN NAME(S)**	Requirement Status for Inventory	Contents
Vertical Dimension (non-stack)	Nonstack_vert_ dimension	If provided for fugitive emissions	Numeric value
Stack-fenceline Distance	stack _fenceline_distance	If provided	Numeric value in feet
	nonstack_dimension _units	If provided for fugitive emissions	Text
	site_rule_regulation_list	If provided	Text List. Standardize for projects.
Controls: Overall Control Efficiency	site_total_capture_cntrl _efficiency	If provided	Number (%)
Rule Effectiveness (%)	site_rule_effectiveness	If provided	Number (%)
	site_rule_effectiveness _method	If provided	NET Code from Table 13.
	process_rule_regulation _list	If provided	Text List. Standardize for projects.

Worksheet for Processing State Databases (Continued)

Project Data Element List	**ERG DATA TEMPLATE COLUMN NAME(S)**	Requirement Status for Inventory	Contents
Controls: Overall Control Efficiency	process_total_capture _cntrl_efficiency	If provided	Number (%)
Rule Effectiveness (%)	process_rule_effectiveness	If provided	Number (%)
	process_rule_effectiveness _method	If provided	NET Code from Table 13.
Control Device 1	ctrl_device_type_1	If provided	NET Code from Table 4.
	local_device_type_code_1	If provided and no applicable NET code from Table 4	State Control Device Type
	ctrl_device_description_1	If provided	Text
Control Device 2	ctrl_device_type_2	If provided	NET Code from Table 4.
	local_device_type_code_2	If provided and no applicable NET code from Table 4	State Control Device Type
	ctrl_device_description_2	If provided	Text

Worksheet for Processing State Databases (Continued)

Project Data Element List	**ERG DATA TEMPLATE COLUMN NAME(S)**	Requirement Status for Inventory	Contents
Control Device 3 Type	ctrl_device_type_3	If provided	NET Code from Table 4.
	local_device_type_code_3	If provided and no applicable NET code from Table 4	State Control Device Type
	ctrl_device_description_3	If provided	Text
Pollutant ID	pollutant_code	Mandatory	NET Code from Table 12.
Pollutant Emissions	emission_numeric_value_1	Mandatory	Numeric value
Pollutant Emissions Type	emission_type_1	Mandatory	NET Code from Table 7.
	emission_units_1	Mandatory	Text (“tons/year” or “lbs/year”)
	emission_control_status_1	If it can be determined whether emissions are on a controlled or an uncontrolled basis	NET Code from Table 2.
	emission_method_code_1	If provided	NET Code from Table 6.
Pollutant Emissions	emission_numeric_value_2	If provided	Numeric value

Worksheet for Processing State Databases (Continued)

Project Data Element List	**ERG DATA TEMPLATE COLUMN NAME(S)**	Requirement Status for Inventory	Contents
Pollutant Emissions Type	emission_type_2	If provided	NET Code from Table 7.
	emission_units_2	If provided	Text (“tons/year” or “lbs/year”)
	emission_control_status_2	If provided	NET Code from Table 2.
	emission_method_code_2	If provided	NET Code from Table 6.
Pollutant Emissions	emission_numeric_value_3	If provided	Numeric value
Pollutant Emissions Type	emission_type_3	If provided	NET Code from Table 7.
	emission_units_3	If provided	Text (“tons/year” or “lbs/year”)
	emission_control_status_3	If provided	NET Code from Table 2.
	emission_method_code_3	If provided	NET Code from Table 6.

Appendix E

State Database Summary Sheets for Draft NTI

STATE DATABASE SUMMARY REPORT

State/Local Agency: Arizona

Base Year of Inventory: 1993

# of CAA HAPs Covered by Inventory: 63

Geographical Area Covered by Inventory: 4 out of 15 total counties in state (Gila, Maricopa, Pima, and Pinal)

General Description of Inventory Database as Received from State:

This inventory was originally prepared for the 1993 National Toxics Inventory (NTI). Other avenues to obtain 1996 data from Arizona were unsuccessful. The data received by ERG consisted of one executable file named "DATA_EPA.EXE". When unzipped, the database consists of one Excel workbook named "DATA_EPA.XLS" that consists of several worksheets. These worksheets (POINT, FACILITY, STACK, AREA, SCC LOOKUP, ASCT LOOKUP, HAP REFERENCES, and NOTES) are constructed as a relational database and contain both point and area emissions.

ERG Modifications/Additions to State Database to Prepare NET Template:

ERG linked the appropriate worksheets and created additional columns to build the template structure for the Arizona data. The originally-reported emissions were included as one template emissions column (average daily emissions) and a second template column was created for annual emissions (converted from average daily emissions based on 365 days of activity). Only nonzero, 188 HAP emissions data were included in the template. A total of 6,531 emissions records were generated for the template.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Arkansas

Base Year of Inventory: 1989-1998 (28% 1993, 18% 1994 & 1995, 13% 1996)

# of CAA HAPs Covered by Inventory: 84

Geographical Area Covered by Inventory: 53 of 75 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Both plant level and segment level emissions were available.

ERG Modifications/Additions to State Database to Prepare NET Template:

Plant level emissions were included in the final database only if segment level data was not available for a particular pollutant.

STATE DATABASE SUMMARY REPORT

State/Local Agency: California

Base Year of Inventory: multiple (1989-44%; 1991-24%; 1995-11%; other years less than 10%)

# of CAA HAPs Covered by Inventory: 132

Geographical Area Covered by Inventory: 52 out of 58 total counties in state (NOT covered: Alpine, Amador, Calaveras, Mariposa, Modoc, and Siskiyou counties)

General Description of Inventory Database as Received from State:

The California data inventory consisted of 10 comma-delimited ASCII files (DEV, EIC, EMS, FAC, POL, PRO, SCC, SIC, STK, and SUP) and is considered a point source inventory. These files were constructed as a relational database. One other file (CARBCNTY.TXT) was provided by the California contact that relates California county codes to county names, so that FIPS county codes could be assigned. The inventory is constantly changing and is updated whenever data are submitted. The version ERG received represents data in the inventory at 11-24-1997. No coordinated effort has been made by California to represent a standard base year in the inventory. Thus, data are reported for many different years, primarily between 1989 and 1996, depending on facility and pollutant. The inventory also contains emissions for many non-188 HAPs.

ERG Modifications/Additions to State Database to Prepare NET Template:

Not all of the original ASCII files were needed to build the template structure for the California data. ERG linked the appropriate files and created additional columns to build the template. Additionally, some "text" data in the original ASCII files were edited (primarily the removal of extra double quotes), and a few unreasonable negative numeric values were set equal to zero. Only nonzero, 188 HAP emissions data were included in the template. A total of 260,073 emissions records were generated for the template. In order to more efficiently process the data in ACCESS, six smaller files were temporarily created to pass the data from SAS, through ACCESS, and into ORACLE.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Colorado

Base Year of Inventory: 86% 1996; 14% 1997

# of CAA HAPs Covered by Inventory: 91

Geographical Area Covered by Inventory: 57 out of 63 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Both plant level and segment level emissions were available.

ERG Modifications/Additions to State Database to Prepare NET Template:

Plant level emissions were included in the final database only if segment level data were not available for a particular pollutant.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Delaware

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 58

Geographical Area Covered by Inventory: Entire State

General Description of Inventory Database as Received from State:

A single table was provided by the Delaware contact. The table included site, emission unit, emission process, stack, and point information. A limited data dictionary was provided by the state. There are no thresholds for reporting toxics information. The flow rates are in actual cubic feet/minute.

ERG Modifications/Additions to State Database to Prepare NET Template:

We were instructed by the state contact to identify any record with PLUME_HT = 0 as a stack source and all others as fugitive sources. All other modifications to their database were simple column heading changes.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Florida

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 52

Geographical Area Covered by Inventory: 52 out of 67 total counties in state

General Description of Inventory Database as Received from State:

2 files - one containing Emission Unit level emissions (also stack parameters), and one containing SCC level emissions for each plant (Emission Unit ID also provided).

ERG Modifications/Additions to State Database to Prepare NET Template:

Added Country, State, County FIPS code, point source designation, and start/end times. Cross referenced pollutant names from state database to template pollutant codes. Merged SCC and Emission Unit Level emissions files resulting in a single file containing plant, unit, and stack data as well as SCC level emissions. Assigned release type (either stack or fugitive) based on the presence (or absence) of stack parameter data.

STATE DATABASE SUMMARY REPORT

State/Local Agency: GLC - Illinois; State of Illinois

Base Year of Inventory: 1993 for GLC; 1996 for Illinois State database

# of CAA HAPs Covered by Inventory: 162

Geographical Area Covered by Inventory: 100 out of 102 total counties in state

General Description of Inventory Database as Received from State:

GLC inventory - received 3 tables: Rapids
Streams
Process

The GLC-Illinois database has over 31,000 scc-pollutant level records, but for a 1993 base year.

Illinois State database - (see summary report for Illinois).

A comparison between the two databases shows that there is about 50% overlap between facilities. The decision was to merge the two databases together with GLC taking higher priority. Will use Illinois State database to supplement. The necessary oracle format tables will be found in "GIC-IL.mdb."

Facility-level emissions can be obtained through the non-captured stack level records.

ERG Modifications/Additions to State Database to Prepare NET Template:

Needed to convert facility and process latitude and longitude from decimal to degrees/minutes/ hours.

Removed overlapping facility -SCC-pollutant records from the Illinois State database (35 records removed).

From GLC: 33,645 records
From Illinois State database: 4,271 records
Total Illinois records to be used: 37,916 records

The GLC records are in "stack data - all 6" and the Illinois State database records are in "ORACLE_TABLE (overlapping records removed)."

5,452 additional facility-pollutant records were created in “Illinois-facility level emissions2.” These records were checked to ensure that there was no overlap between facility level and stack level.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Idaho

Base Year of Inventory: Base year for each facility estimate ranges from 1997-1989, with majority (>75%) of records representing base years 1994-1997.

# of CAA HAPs Covered by Inventory: 45

Geographical Area Covered by Inventory: 23 out of 44 total counties in state

General Description of Inventory Database as Received from State:

Idaho submitted the dBase III+ version of their Industrial Emission Inventory, which contained the following 7 types of files: company data, process information, stack data, permit limits, emission limits (based mostly on fee data), facility total emissions, and chemical look-up table. The reported emissions include actual, permitted, or maximum potential to emit emissions, depending on the source of the inventory data. Most of the reported emissions are based on permit limits (or conditions that are outlined in the permit, but not necessarily an official permit limit). Emissions for some facilities are based on fee data. Facility and emissions data that were extracted from the database represent approximately 48 facilities.

ERG Modifications/Additions to State Database to Prepare NET Template:

Stack identification codes (IDs) were provided only for 7 stacks; therefore, ERG created default stack IDs for more than 350 stack records. This modification enabled ERG to use stack data that were provided at the point level. In the STACK table, some values and units that were listed as "Flow" appeared to be velocity data; therefore, ERG created a velocity column and moved these "Flow" values and units to the newly created "Velocity" column.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Illinois

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 100

Geographical Area Covered by Inventory: 100 out of 102 total counties in state

General Description of Inventory Database as Received from State:

The Illinois EPA contact, John Ting, provided a 1996 base year air toxic database for the entire state. There were no reporting thresholds for the database. Emissions were reported on the SCC level. The database was received in four files: facility information, stack parameters, emissions release data and a source ID dictionary. Unique emission points can be identified by the plant, emission unit and the process ID codes.

ERG Modifications/Additions to State Database to Prepare NET Template:

If stack parameters were available, then the source was assumed to be a vertical stack. If the process description field contained the word "fugitive" the source was labeled a fugitive source. Otherwise, the emission release point type field was left blank. When multiple SCCs were reported for a unique process (15 processes), the maximum SCC was used because the state contact indicated that multiple SCCs were due to differences in opinion between state analysts about the correct SCC assignment. The state contact said that multiple emissions reported for the same process and pollutant are due to failure to remove old records from the database. In these cases, the largest emission value was used in the final database.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Indiana

Base Year of Inventory: 1993-1996 for databases received from state, combined with 1993 base year GLC inventory

# of CAA HAPs Covered by Inventory: 162

Geographical Area Covered by Inventory: 89 out of 92 total counties in state

General Description of Inventory Database as Received from State:

State databases consist of a single table for each reporting year. No special instructions or data dictionary were provided by the state contact. Industries were instructed to report their emission in units of tons per year. As the state received the industry reports they noticed some plants reported emissions in units of pounds per year. Unit conversions were performed by the state on a plant by plant basis and some plants were contacted to verify the units, but the process was never reviewed. The state contact urged ERG to use the database with caution.

ERG Modifications/Additions to State Database to Prepare NET Template:

A visual inspection of the estimates was done to QA the emission units and no changes were made to the units reported by the state.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Kentucky, Jefferson Co.

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 61

Geographical Area Covered by Inventory: Jefferson Co., Kentucky

General Description of Inventory Database as Received from State:

The Jefferson County Department of Planning and Environmental Management contact, Ken Irwin, provided the state air toxics database in the form of four files: plant level emissions, general plant information, stack data and factors to distribute emissions to emission units. The reporting threshold was given as one ton of annual emissions. A unique emission source can be identified by the plant and emission unit identification codes.

ERG Modifications/Additions to State Database to Prepare NET Template:

If factors were not given to distribute emissions to the emission unit level, then plant level emissions were reported for a given plant. If stack parameters were given, then the source was assumed to be a vertical stack. Otherwise, the emission release point type field was left blank.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Kansas

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 81

Geographical Area Covered by Inventory: 48 out of 105 total counties in state

General Description of Inventory Database as Received from State:

The Kansas Department of Health and Environment provided a 1996 base year database of actual emissions at the process level with SCCs for the whole state. The database was received in four files: general plant information, emission information, stack parameters and a CAS No. dictionary. A unique process is identified by the plant, unit, stack and process ID codes. The reporting thresholds are 10 tons for a single HAP or 25 tons total HAP annually.

ERG Modifications/Additions to State Database to Prepare NET Template:

If stack parameters were available, then the source was assumed to be a vertical stack. Otherwise, the emission release point type field was left blank. State plant ID codes are unique within a county but not unique for the entire state so a hybrid plant ID was constructed from the state ID and the county FIP code. If there were multiple emissions reported for a unique process, for the same HAP, then the emissions were summed to be conservative.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Louisiana

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 122

Geographical Area Covered by Inventory: 51 out of 64 total parishes

General Description of Inventory Database as Received from State:

The original database as received from the Louisiana Division of Environmental Quality (DEQ), contains individual HAPs emissions data at the plant/process level, with no stack information provided. The inventory includes 'major' point sources, which follows the MACT definition of major (>10 tpy of one HAP, or >25 tpy of multiple HAPs. The inventory emissions represent actual emissions as determined through a variety of methods, including stack testing, mass balance, EPA emission factors, and engineering judgement.

ERG Modifications/Additions to State Database to Prepare NET Template:

Latitude and longitude data were added for each facility in the inventory. The latitude/longitude data were obtained from EPA/OPPE, where latitude and longitude had already been linked to facilities in the Louisiana inventory database.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Maine

Base Year of Inventory: 1993

# of CAA HAPs Covered by Inventory: 50

Geographical Area Covered by Inventory: 16/16 Counties

General Description of Inventory Database as Received from State:

One table, "MasterDB.xls," was provided. Useful data included were street address, city, county, zip code, latitude/longitude, UTM coordinates, SIC code, NEDS ID, TRI ID, EPA ID, Dun & Bradstreet ID, maximum emissions, fugitive emissions, and stack emissions. There were also some control device information provided in the spreadsheet. MasterDB.xls was sent in a TRI-style format. Emissions were reported in lb/yr. The state contact had verified that stack and fugitive emissions were actual annual, and maximum emissions were potential annual.

ERG Modifications/Additions to State Database to Prepare NET Template:

Fugitive and stack emissions were converted from lb/yr to ton/yr. Lat/lon data were converted to DDDMMSS format, from separate degree, minute, seconds columns. Maximum emissions were omitted in the final NET template, as the fugitive and stack emissions exceeded these "potential" maximum emissions in certain records.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Maryland

Base Year of Inventory: 1996 (the inventory is updated as needed based on facility changes)

# of CAA HAPs Covered by Inventory: 179

Geographical Area Covered by Inventory: 23 out of 24 total counties in state

General Description of Inventory Database as Received from State:

Received 9 tables:
- CASINFO - CAS information
- CITY - county name and zipcode information
- COMPANY - company address, UTM coordinates, SIC
- EMIDEVCO - control devices used
- EMIGENFR - emission point description
- EMISCH - emission point schedule
- EMISTK - stack information
- PERMIT - contained nothing
- TAPEMIS - emissions table

ERG Modifications/Additions to State Database to Prepare NET Template:

A significant percentage of these files were in error (e.g., incorrect county codes, duplicate emission values, misspellings, unreasonable emission values). After consultation with the state contact, these errors were corrected by ERG. Also, a state local site ID code was created. Most of the stack data were not usable because of the limited amount of data provided. The emissions were on a facility basis.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Mississippi

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 16

Geographical Area Covered by Inventory: 19 out of 82 counties in the state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Segment level emissions data were available for all facilities.

ERG Modifications/Additions to State Database to Prepare NET Template:

None.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Missouri

Base Year of Inventory: 1996 (although actual records range over several years, they are generally applicable to 1996 conditions)

# of CAA HAPs Covered by Inventory: 110

Geographical Area Covered by Inventory: 84 out of 115 total counties in state

General Description of Inventory Database as Received from State:

The air toxics data for the State of Missouri represent actual emissions that are self-reported by more than 750 facilities operating in Missouri. These data, which come from Missouri's FORM2.T database, are from facilities that are required to report air toxics in accordance with Missouri's air toxics reporting requirements. The majority of the facilities in the Missouri database are considered point sources; however, there are some area sources as well.

It is important to note that there are data gaps (for speciated air toxics data) in the Missouri database that result from facilities neglecting to report speciated air toxics and instead, report "total VOC" or "total HAP". In these situations, it is not possible to speciate the total emissions; therefore, the facility and emissions data for these facilities are not included.

All speciated air toxics data in this database come from Form 2.T. The reporting thresholds for hazardous air pollutants (HAPs) are outlined in the state's reporting instructions for Form 2.T. Any facility emitting 20 pounds or more of a Category 1 HAP (annually) must report emissions on Form 2.T for each Category 1 HAP emitted Any facility emitting 200 pounds or more of a Category 2 HAP (annually) must also report emissions on Form 2.T for each Category 2 HAP emitted. Category 1 and 2 HAPs are listed below.

<u>Category 1 HAPs</u>
Arsenic compounds (inorganic including arsine)
Asbestos
Chromium compounds
Hydrazine
Tetrachlorodibenzo-p-dioxin, (2,3,7,8-)

<u>Category 2 HAPs</u>
All other HAPs not listed as Category 1 HAPs

ERG Modifications/Additions to State Database to Prepare NET Template:

Unique facility identification codes were created by concatenating the facility and county codes. Additional modification involved linking the Missouri pollutant codes to CAS numbers.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Nebraska

Base Year of Inventory: 1990, 1994, 1995, 1996, 1997 (approx. 99% is 1995, 1996 or 1997 data)

# of CAA HAPs Covered by Inventory: 98

Geographical Area Covered by Inventory: 54 out of 55 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Both plant level and segment level emissions data were available.

ERG Modifications/Additions to State Database to Prepare NET Template:

Plant level emissions were included in the final database only if segment level data were not available for a particular facility or pollutant.

STATE DATABASE SUMMARY REPORT

State/Local Agency: New Hampshire

Base Year of Inventory: 1993-1998, 58% 1996, 15% 1995

# of CAA HAPs Covered by Inventory: 29

Geographical Area Covered by Inventory: 8 out of 10 counties in the state

General Description of Inventory Database as Received from State:

The most current emission data for each facility was downloaded from AIRS. Segment level emissions data were available for all facilities.

ERG Modifications/Additions to State Database to Prepare NET Template:

No significant modifications/additions.

STATE DATABASE SUMMARY REPORT

State/Local Agency: New Mexico

Base Year of Inventory: 1991-1994

# of CAA HAPs Covered by Inventory: 40

Geographical Area Covered by Inventory: 11 out of 33 total counties in state; does not include Albuquerque and the Pueblo Indian Reservation, where data were unavailable.

General Description of Inventory Database as Received from State:

The state database includes the following tables: Company, Contact, Hapsemit, Information, Point, Site, and Stack. The inventory consists of emission unit level data and includes stack parameters. Facilities were required to report emissions greater than a ton for any HAP, but some facilities provided emissions under the threshold.

ERG Modifications/Additions to State Database to Prepare NET Template:

Only cosmetic changes (field headings, character definitions) were made to the state database in order to fit the NET template.

STATE DATABASE SUMMARY REPORT

State/Local Agency: New York

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 160

Geographical Area Covered by Inventory: 62 out of 62 total counties in state

General Description of Inventory Database as Received from State:

The New York State Department of Environmental Conservation contact, provided toxics release information on the plant or emission unit level in a single electronic file. A file of the SWIS county codes matched to counties was also provided to assist with determining the County FIPs code. A unique emission source can be identified by the site name, stack identification code and county FIPs code. A separate file, SCNAME.xls provided a key for the source code descriptions. Since the New York database was updated to October 1996, the baseline year was assumed to be 1996. However, actual data may range in years between 1993 to 1996. The reporting threshold is 5 tons per year of a single HAP or VOC and 12.5 tons per year of total HAP or VOC. The state contact indicated that emissions for stack identification numbers ending in 'TOTAL' are from confidential sources. In these cases, the entire plant emissions are reported instead of stack level emissions. The state contact said to assume all sources are non-fugitive stack sources. For example, some ETO sterilizers may be vented out horizontally from a pipe.

The state contact said that stack heights below 33 feet should be suspect of being incorrect. The New York State contact made revisions to the stack parameters that did not have reasonable values. Stack diameters greater than 360 inches were replaced if the flow rate and the velocity multiplied by the area ($D^2/4 * \pi$) varied by more than 20 percent. If the calculated diameter was less than the reported diameter, the calculated diameter was used. Otherwise, the diameter was set to a default diameter of 4 inches.

Stack heights greater than 330 feet were reviewed and replaced based on the judgement of the NY State contact. For the most part, combustion sources (SIC 4911, 4931, 7xxx, 8100-8299, 91xx) were not changed because tall stacks are realistic for these sources. All other stacks greater than 330 feet were changed to a default value of 33 feet, changed to a stack height at a similar facility or left unchanged based on the judgement of the NY State contact. Also the state contact said that if the reported percent control is equal to zero, the source or facility has no control device for that contaminant. If the reported percent control is greater than zero, assume the source or facility has some control device for that contaminant. This information was used to determine the control status for reported emissions.

ERG Modifications/Additions to State Database to Prepare NET Template:

New York did not provide a site ID and the site name could not be used to identify a unique site. Therefore the site address was used to identify a unique site. Site names and addresses were not consistently typed in the database. For example, a site name or address may have added spaces or punctuation for different records. The addresses were reformatted to create a set of unique addresses and then a numeric local site ID code was assigned to each address. A unique site name was then matched to each site ID to remove differences in formatting of site names such as abbreviations, extra spaces and punctuation.

Using the CAS numbers provided by New York and the ERG HAP dictionary, HAPs were extracted from the database provided by New York. Duplicate emission values for a single site, stack ID and pollutant were summed. When the same stack had multiple values for stack parameters, the maximum stack parameter was used.

The first two digits of the NYID are the SWIS county code. Using the county name and the SWIS county code, the county FIPs codes could be matched to each site.

Unit level descriptions were pulled in using the SCNAME table provided by New York. There were 230 facilities that had multiple SIC codes in the original data. The SIC that appeared in the most records for a facility was selected as the SIC for the facility in order to maintain a unique SIC for each facility.

STATE DATABASE SUMMARY REPORT

State/Local Agency: North Carolina

Base Year of Inventory: 1993-1996

# of CAA HAPs Covered by Inventory: 155

Geographical Area Covered by Inventory: 94 out of 100 total counties in state

General Description of Inventory Database as Received from State:

Received two files: emission - emission table by pollutant
emission_fac - facility information

These files were on a facility level. NC does have stack level information, but the data are for 1993 and the VOCs are not speciated into individual HAPs. Elected to use facility level emissions. Note, this inventory was updated in February 1999 to correct known errors.

ERG Modifications/Additions to State Database to Prepare NET Template:

No significant modifications/additions.

STATE DATABASE SUMMARY REPORT

State/Local Agency: North Dakota

Base Year of Inventory: 1994-1996

# of CAA HAPs Covered by Inventory: 29

Geographical Area Covered by Inventory: 19 out of the 53 counties in the state

General Description of Inventory Database as Received from State:

The inventory database was contained in a single access file consisting of five tables: HAP Annual Emissions, HAP Emission Rates, HAP Sources, Section 112(b), and Stack Parameters. Emissions data were available at the plant level and emission rates were available at the stack level. All sources that emit greater than ½ ton of any HAP are required to report their emissions to the state.

ERG Modifications/Additions to State Database to Prepare NET Template:

The state database was separated into two emissions tables: one for plant level data and another for stack level data. When stack parameter information was available including emission rates for a given pollutant, plant emissions were partitioned to stacks in such a way as to be proportional to their emission rates. For plants without stacks, or with stacks and no defined parameters, emissions were reported as a plant total.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Oregon

Base Year of Inventory: Continually updated

# of CAA HAPs Covered by Inventory: 80 unique HAPs, 82 unique pollutants

Geographical Area Covered by Inventory: 26 out of 36 total counties in state

General Description of Inventory Database as Received from State:

Gerald Ebersole of the Oregon Department of Environmental Quality provided annual potential air toxic emissions from Title V application forms in a single electronic file. The file contains plant level emissions for major sources determined from Title V applications. The reporting thresholds are the same as Title V requirements. Oregon updates their emission data continually and the emission data were assumed to be representative of 1996. The state also provided a file that matched CAS numbers to Oregon pollutant codes and a file that contained SCCs related to each plant. Stack data were provided in separate report form files for each site. These files were not used because they could not be converted into the required Access column format with an automated procedure.

ERG Modifications/Additions to State Database to Prepare NET Template:

CAS numbers were used to identify HAPs. SCCs were not used because emissions were not reported on the process level. When multiple records for the same pollutant were found, the maximum emission value was taken.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Pennsylvania

Base Year of Inventory: 1991-1996

# of CAA HAPs Covered by Inventory: 74

Geographical Area Covered by Inventory: 38 out of 67 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Segment level emissions data were available for all facilities.

ERG Modifications/Additions to State Database to Prepare NET Template:

None.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Rhode Island

Base Year of Inventory: 1994

# of CAA HAPs Covered by Inventory: 86

Geographical Area Covered by Inventory:

General Description of Inventory Database as Received from State:

Two tables were provided by the Rhode Island state contact: Emissions and Process Codes. The inventory consists of plant level emissions with one or more process descriptions per plant and there were no specific thresholds for reporting emissions.

ERG Modifications/Additions to State Database to Prepare NET Template:

Stack parameters were imported from the AIRS database for plant names common to both AIRS and the state database. The facility's zip code was used to verify the plant match. For states with multiple stacks, an average stack parameter value was calculated which might include zeroes in the averaging. Zipcode information was used in conjunction with a digital mapping tool to obtain county FIPS codes.

STATE DATABASE SUMMARY REPORT

State/Local Agency: South Carolina

Base Year of Inventory: 1995

# of CAA HAPs Covered by Inventory: 50

Geographical Area Covered by Inventory: 43 out of 46 total counties in state

General Description of Inventory Database as Received from State:

The original inventory database consisted of three files, representing emissions data at the plant, stack, and SCC/process level. Through discussions with South Carolina DHEC, it was determined that the stack file was not sufficiently developed to get reliable links with the process data file. The South Carolina DHEC will be continuing to develop their database during 1998, and it's possible that stack information could be added at a later date.

The general cut-off used by SC DHEC for including sources in the database is that they be point sources meeting the MACT definition of 'major' (i.e., >10 tpy of a single HAP or >25 tpy for multiple HAPs).

ERG Modifications/Additions to State Database to Prepare NET Template:

ERG used the process-level emissions data file records wherever available for a facility. Where a facility was not covered in the process-level file or was not covered for a specific HAP, then the plant-level emissions data file was used if available.

STATE DATABASE SUMMARY REPORT

State/Local Agency: South Dakota

Base Year of Inventory: 1993 and 1996

# of CAA HAPs Covered by Inventory: 6

Geographical Area Covered by Inventory: 3 out of 66 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Segment level emissions data were available for all facilities.

ERG Modifications/Additions to State Database to Prepare NET Template:

None.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Tennessee

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 3

Geographical Area Covered by Inventory: 3 out of 95 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Segment level emissions data were available for all facilities.

ERG Modifications/Additions to State Database to Prepare NET Template:

None.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Texas

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 206 (number is greater than 188 since database contains multiple species of a listed 188 HAP)

Geographical Area Covered by Inventory: 196 out of 254 total counties in state

General Description of Inventory Database as Received from State:

The Texas inventory consisted of a single table: TXHAP96. The inventory includes site, emission unit, process, and stack information. A detailed data dictionary was provided. Both 1995 and 1996 reporting years populate the inventory, but the state cannot distinguish the reporting year of each record. In ORACLE template a 1996 reporting year was assumed. The units for flow rate are standard feet/minute at 68 F.

ERG Modifications/Additions to State Database to Prepare NET Template:

The state inventory contains duplicate records when multiple control device types are known to exist at a process level. To prevent double counting, the first record of every duplicate was retained in the ORACLE template. The state's pollutant dictionary includes multiple chemical names for some CAS numbers, resulting in duplicate emissions at the segment level. These emissions were summed to remove the duplication.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Utah

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 93 unique HAPs appear in ERG's final processed database (all 188 CAA HAPs are targeted by the Utah Division of Air Quality)

Geographical Area Covered by Inventory: 19 out of 29 total counties in state

General Description of Inventory Database as Received from State:

The original database as received from the Utah Div. of Air Quality, contains individual HAPs emissions data at the plant/process level, with no stack information provided. The process level identifier is not a direct match to EPA's SCC; instead it refers back to the EPA's document entitled "Documentation for Developing the Initial Source Category List".

The inventory includes 'major' point sources, which generally follows the MACT definition of major (>10 tpy of one HAP, or >25 tpy of multiple HAPs) plus there is a lower emission cut-off of 500 lbs/year for a single HAP. The inventory emissions represent actual emissions as reported by the facilities.

ERG Modifications/Additions to State Database to Prepare NET Template:

ERG used the process level identifier provided in the original Utah database to assign specific SCC's where available for source categories. This required making a cross-link between the text identifier as provided in the Utah database, along with information provided in EPA's document entitled "Documentation for Developing the Initial Source Category List." In some cases a direct correlation could not be made and no SCC was assigned.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Vermont

Base Year of Inventory: 1994-1997

# of CAA HAPs Covered by Inventory: 60

Geographical Area Covered by Inventory: Entire state

General Description of Inventory Database as Received from State:

Received 7 files:
- Chem - list of chemicals
- Chemlook - lookup table for listed chemicals
- Factoxem - chemical emission rate
- Factoxus - facility info
- Toxchem - % wt by mass
- Toxemis - segment level data
- Toxprod - MSDs info; density

VT has 3 options for submitting data: 1) Permits 2) Mass balance 3) testing.

ERG Modifications/Additions to State Database to Prepare NET Template:

No site specific location was given (address, zip, latitude, longitude, etc.). Address information was obtained for each site through the business version of PhoneDisc. From the street address, the latitude and longitude information was obtained using Geotracker. FIPs county codes were obtained as well. All of these emissions are facility level.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Virginia

Base Year of Inventory: 1993-1997 (approx. 73% is 1996 data)

# of CAA HAPs Covered by Inventory: 40 unique CAS No, 33 unique HAPs

Geographical Area Covered by Inventory: 92 out of 136 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Both plant level and segment level emissions were available.

ERG Modifications/Additions to State Database to Prepare NET Template:

Plant level emissions were included in the final database only if segment level data were not available for a particular pollutant.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Washington

Base Year of Inventory: 1993-1996

# of CAA HAPs Covered by Inventory: 62

Geographical Area Covered by Inventory: All 10 Washington Air Pollution Control Authorities may contribute data but coverage is not complete.

General Description of Inventory Database as Received from State:

The Washington state Department of Ecology contact sent their latest version of the state air toxics database in the single file containing emissions, stack parameters, plant location and identification information. Emissions were given on the emission unit level. A unique emission source can be identified by the plant and emission unit identification codes. The year for emissions reported ranges from 1993 to 1996 but the majority are for a 1996 base year. The state database predominantly covers the Northwest, Olympic and Spokane Air Pollution Control Authorities. However, some pulp and paper facilities for the remainder of the state are also included

ERG Modifications/Additions to State Database to Prepare NET Template:

If stack parameters were available, the source was assumed to be a vertical stack. Otherwise, the emission release point type field was left blank. If multiple records were found for the same pollutant process, the emission values were summed.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Washington, Puget Sound APCA

Base Year of Inventory: 1995-1997 (approx. 85% are 1996)

# of CAA HAPs Covered by Inventory: 73

Geographical Area Covered by Inventory: Puget Sound APCA (4 counties)

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Both plant level and segment level emissions were available.

ERG Modifications/Additions to State Database to Prepare NET Template:

Plant level emissions were included in the final database only if segment level data were not available for a particular pollutant.

STATE DATABASE SUMMARY REPORT

State/Local Agency: West Virginia

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 61

Geographical Area Covered by Inventory: 34 out of 55 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Segment level emissions data were available for all facilities.

ERG Modifications/Additions to State Database to Prepare NET Template:

None.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Wisconsin

Base Year of Inventory: 1996

# of CAA HAPs Covered by Inventory: 188

Geographical Area Covered by Inventory: 64 out of 72 total counties in state

General Description of Inventory Database as Received from State:

The Wisconsin Inventory is included in two files PROEMIS.TXT that contains point and area source process emission data and STKEMIS.TXT that contains stack data.

ERG Modifications/Additions to State Database to Prepare NET Template:

As received, the process data were not linked to the stack data; this had to be done manually. In some cases, all processes were vented out a singular stack, in other cases, a single process would be discharged to multiple stacks, and in still other cases, multiple process would be discharged to multiple stacks. Where the stack emissions were less than the aggregated process emissions, the state confirmed that the difference represented fugitive emissions. ERG checked that there were no cases where the aggregated process emissions were less than the stack emissions. Because these data were not linked, ERG had to use its best judgement in assigning stack parameters to process emissions. Approximately 10 percent of the data did not have SCC codes associated with them. No attempt was made to match SCC codes with the processes; instead all process descriptions were retained for future matching.

STATE DATABASE SUMMARY REPORT

State/Local Agency: Wyoming

Base Year of Inventory: 1995-97 (approx 80% 1996)

# of CAA HAPs Covered by Inventory: 56

Geographical Area Covered by Inventory: 20 out of 23 total counties in state

General Description of Inventory Database as Received from State:

The most current emission data for each facility were downloaded from AIRS. Both plant level and segment level emissions were available.

ERG Modifications/Additions to State Database to Prepare NET Template:

Plant level emissions were included in the final database only if segment level data were not available for a particular pollutant.